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ORIGINAL ARTICLES.

THE SURGICAL TREATMENT OF EXOPHTHALMIC GOITER.[1]

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THE treatment of Graves' disease constitutes one of the unsatisfactory chapters in therapeutics. One does not have to look far into the literature of the subject to find conclusions widely different. A. praises the virtues of galvanism; B. vaunts the efficacy of digitalis; while C. may be found extolling the properties of belladonna, aconite, veratrum viride, or duboisin. It is a fact that no one claims to cure very many cases. In studying the treatment, one soon concludes that, in the majority of cases, staying the progress of the disease for a variable length of time is all that is to be expected. This is scarcely to be wondered at, in consideration of the fact that we are in the dark as to the nature of the disease. We are not only ignorant of its seat, but we do not even know whether it is organic or functional. What we do know is, principally, that a certain symptom-complex occurs with sufficient frequency to characterize it as a definite disease, and careful clinical study in late years has made our task even more difficult in having recognized the occurrence of incompletely developed forms, the interpretation of which is by no means always easy.

The triad of symptoms originally described as characteristic of Graves' disease, tachycardia with subjective sensation of palpitation, a vascular swelling of the thyroid gland, and exophthalmos, has been added to by the observation of various symptoms on the part of the eye and the general nervous system. Under the latter head may be mentioned tremor, hyperidrosis, subjective sensations of heat, vertigo, nausea, vomiting, and insomnia; a marked diminution of the resistance of the skin to the electric current is also almost constantly found. In the eye, Graefe's symptom, a failure of the upper lid to follow the downward movements of the globe, holds the most prominent position as a diagnostic point, excepting, of course, the exophthalmos; an almost entire absence of the involuntary wink was also described by Stellwag, and this symptom bears his name. It was the result of Marie's[2] exhaustive study of the subject, however, to show that cases occur in which any of these symptoms may be absent; that the combination of only one of the cardinal symptoms with some of the other nervous manifestations may be all that we have with which to make a diagnosis. The disease is always harassing to the patient, if it be at all strongly marked, and, if it progress, may lead to the development of a decided cachexia and to a lethal ending.

This is neither the time nor place for an exhaustive discussion of the pathology and causation of exophthalmic goiter, but a short consideration of the principal theories may be of interest, and will certainly aid us in judging the results of the treatment. Following Gauthier's classification, the theories proposed for the explanation of exophthalmic goiter may be placed in three divisions:

1. *The cardio-vascular theories*, which locate the seat of the disease in the heart itself, the vessels, and the blood.

2. *The mechanical theories*, which connect the symptoms with compression of vessels or nerves in the neck by the primarily hypertrophied thyroid.

3. *The nervous theories*, which attribute the disease to disturbances in the pneumogastric, in the sympathetic itself, or in the central nervous system proper.

The cardio-vascular theories we can put aside without any further discussion, as they have, at the present day, few or no supporters. Not so, however, the mechanical theories. These concern us deeply, for upon them a number of surgical authorities base their procedures in the attempt to establish a rational treatment. On the strength of these has surgery again invaded a new territory, where previously her interference was not thought of. The mechanical theories attribute the origin of the symptoms to pressure on the organs of the neck by the goiter itself. Some consider the vessels as suffering chiefly from this pressure; others the sympathetic or vagus; and still others believe the symptoms to result from pressure on nerves and vessels together. In support of the mechanical theory, its advocates pointed to the clinical observation of cases in which the onset of nervous symptoms coincided with the growth of a previously existing goiter of whatever character, and in which at the same time other evidence of pressure was manifest by the inter-

[1] Read before the Association of American Physicians in Berlin.

[2] Marie: Contribution à l'étude et au diagnostic des formes frustes de la maladie de Basedow.—Paris, aux Bureaux du Progrès Med. 1886.

currence of dyspnea or dysphagia, for instance. However effectually the clinical testimony of the opponents of the mechanical theory confuted it as applying to Graves' disease in general, it could not be denied that the theory seemed applicable to a certain number of cases. Just as unlikely as it was that exophthalmos and tachycardia existing for months or years before the development of a goiter could be caused by pressure from this goiter, just so likely did it seem, in the other class of cases, that the increase of size in the thyroid gland was directly responsible for the nervous symptoms following it. Especially so was this the case when other differences in the two classes of cases seemed to be apparent. Thus, as early as 1869, Eulenburg[1] attempted the differentiation of "true morbus Basedowii" from struma causing irritation of the sympathetic. As characteristic of the latter condition, he gives symptoms of *irritation* on the part of the pupil and vasomotor nerves, while in "true Basedow's disease" pupillary symptoms are entirely absent, and paralytic symptoms on the part of the vasomotor nerves of the head are manifest. He likewise mentions stenocardial attacks and psychic symptoms as belonging to true morbus Basedowii, and not to the other.

Gauthier[2] is of the same opinion regarding these two forms. He speaks of a "surgical Basedow's disease," caused by the primary hypertrophy of the thyroid, and of true Basedow's disease. He gives the clinical history of a case which, in this connection, is very interesting. A female patient, aged sixty, presented herself with a cystic goiter of thirty years' standing. "She had all the symptoms of Basedow's disease." The cyst was emptied by puncture, and injected with iodin, and the patient was discharged, cured of her symptoms. Seven years afterward the gland enlarged anew, and the patient again presented the symptoms of Basedow. Her death prevented a second operation. The clinical course of this case certainly renders it probable that the nervous symptoms were due to the size of the tumor. Gauthier cites a case of MacNaughton Jones's, and one of Ollier's of similar character. Dubrueil[3] also reports a case in a young man of twenty-two, who had a goiter of the right side, the size of an apple, and of two years' standing. The tumor fluctuated, and was absolutely without pulsation; slight bilateral exophthalmos was present, and the pupils were dilated, "especially the right one;" the pulse was 120; the heart's action was abnormally strong, and a systolic blowing could be heard at the apex. About 200 g. of a brownish fluid were withdrawn from the cyst by puncture; but as it refilled in a few days it was enucleated. The man was discharged "cured," after several weeks, with a pulse of 80. It would seem that this case should be classed under the heading "surgical," if such a term be justifiable, and I think that, with our present imperfect knowledge of the subject, it is so.

However, the mechanical theory is applicable to a limited number of cases only, and for the explanation of the far greater number recourse has been had to the nervous theories, although they are almost entirely hypothetic or inferential. The result of the surgeon's interference in cases of true Graves' disease, however much the patients may have been benefited, has been only to add to the mystery at present enveloping the pathology of the disease. I have thought it advisable therefore to search in the literature for enlightenment, to ascertain what has been done, and what conclusions may be drawn on this subject.

As pioneers in subjecting exophthalmic goiter to surgical procedure we must consider Jones, Gauthier, Ollier, and Tillaux. In the cases operated upon by Jones and Ollier, however, the indications seem to have been rather the symptoms caused by the size of the tumor than the nervous manifestations. This, indeed, would also appear to have been the case with Tillaux, although in his report he discusses the case as one of Basedow's disease. Rehn seems to have been the first to operate in a case of Graves' disease, although the report renders it likely that the large struma was not the primary trouble. In the majority of cases reported, both before and after his, the size of the tumor would have been sufficient indication for the performance of the operation. It is upon those cases, however, in which the thyroid enlargement plays a lesser rôle, that we must depend in appraising the value of operation in true Graves' disease; not that a large goiter is a bar to the diagnosis, but because the more typical cases are those in which the thyroid tumor does not assume very large proportions.

It is by no means easy in passing on the cases reported in the literature to distinguish between true Graves' disease and symptomatic or "surgical" exophthalmic goiter, and this is highly desirable. Aside from the fact that the clinical identity of these two conditions is by no means positive, and that this classification is to a very large degree arbitrary; apart from the fact that it is impossible in many cases to differentiate, clinically, the "surgical" from the "true" form of Graves' disease, the reports in very many or most of the cases are so imperfect that it is difficult to estimate their value in attempting to arrive at conclusions. The importance of properly interpreting cases reported is manifest, for upon this largely rests the position in surgery that operation for exoph-

[1] Eulenburg: Virchow-Hirsch Jahresb. 1869, ii, p. 273.
[2] Gauthier: Lyon Médicale, No. 22, 1888.
[3] Dubrueil: Gaz. de Paris, lviii, 87.

thalmic goiter is to hold. Furthermore, by the results of previous operations must we form the indications for surgical procedure, if we believe this to be justifiable.

Assuming, then, that we have good reports before us, there still remain very considerable difficulties in our way. In the first place, the nature of the struma itself has given rise to doubt. Trendelenburg, for instance, in reviewing a case reported by Tillaux, takes exception to the diagnosis "Basedow's disease," because of the absence of exophthalmos, and because the extirpated struma contained a cyst filled with blood. Neither of these circumstances can warrant a denial of the diagnosis, though we confess that they both render it somewhat doubtful. We are willing nowadays to diagnosticate Graves' disease when the triad of symptoms is not typically present; we are even taught to diagnosticate it, though two of them be absent. On the other hand, we must recognize the fact that the struma may undergo hyperplastic and degenerative changes in typical cases of Graves' disease.

Interesting in this connection are the somewhat remarkable conclusions of Schrang.[1] This author reports that of 3304 cases of ordinary goiter examined by him, during life and post mortem, 344 of them, 10 per cent., had heart-trouble of one kind or another, without valvular lesion; a considerable number more had valvular lesions. A large number of these patients consulted the physician primarily on account of palpitation of the heart, and so convinced is Schrang of the relation between goiter and heart-disease, that he declares the cause of death in goitrous patients, as a usual thing, to be heart-failure, whether from simple dilatation, degenerative changes, or actual valvular lesions. As the result of his long experience, he believes that certain forms of goiter can cause "cardiac degeneration;" and, what is still more remarkable, that hyperactivity and hypertrophy of the heart can produce a goiter. In what manner this can be brought about he does not clearly show, relying on the statistics mentioned for his statement. This is of importance to us, in so far as it must make us very cautious, in this investigation, about accepting the diagnosis, "true Graves' disease," in any case in which the three cardinal symptoms are not present, and in which the clinical history given is not sufficiently complete to remove all doubt as to the nature of the case. Thus, in this very case of Tillaux's, Trendelenburg is perfectly justified in his doubt, as exophthalmos was absent, and the tumor was large enough to cause dyspnea, and was of cystic character.

In attempting to conclude whether or not any cases reported as cured by operation were cases of "true Graves' disease," I believe the clinical history to be the safest criterion; that is to say, if exophthalmos and tachycardia were present before the development of the goiter in a given case, it certainly seems evident that the goiter, *by virtue of its size*, could not be considered their cause.

Let us now turn to the literature, and endeavor to select therefrom all cases of exophthalmic goiter that were subjected to surgical interference, whether this consisted in extirpation with the knife or in the older methods, such as the use of the seton and caustic. The total number of cases found is forty-one; of these, extirpation of the goiter was practised in thirty-three; and of these, partial extirpation in twenty-one, total extirpation in one; and in the remaining eleven cases the exact nature of the operation is not given. Two of the patients operated upon died. The mortality of these extirpations is, therefore, about 6 per cent. Three cases were treated by ligature of the thyroid arteries, and five by the seton, caustic, or simple puncture; all of these recovered. Twenty-five were reported cured of all symptoms; eleven were improved; three were unimproved; and in fact in one of these three cases the exophthalmos is said to have become more pronounced after the operation. Of the forty-one cases reported, twenty-five are said to have been cured, but only in fifteen does the report cover a period of more than six months from the time of operation; several are reported after intervals of from six weeks to four months. According to the reports of the various authors, more cases are characterized as "cured" than my summary will show. In several cases the author, after reporting his case "well," goes on to tell how the "exophthalmos was very much less," the "struma almost disappeared," "the pulse now perfectly regular, and beating 80–90 a minute," and so on. As long as any of the cardinal symptoms remain after operation the case cannot be said to have been cured; amelioration of the patient's condition can in such a case justify only the predicate "improved."

For the sake of a better appreciation of the cases, I have tried to divide them into three classes from the histories given. I have classed as "surgical" those cases in which the nervous symptoms seemed directly dependent upon the size and growth of the goiter. Not only does Eulenburg mention this class of cases, but Gowers[1] also says that "a large struma, of endemic origin, often presses on the sympathetic, and perhaps on the vagus, and causes palpitation and exophthalmos." I have considered as instances of "true Graves' disease" only such cases in which

[1] Schrang: Arch. f. klin. Chir., xxxiv, 1886.

[1] Gowers: Diseases of the Nervous System, 1890.

No.	Reported by	Reported in	Result.	Nature of case.	Struma present	Exophthalmos present	Tachycardia present	Reported after	Remarks.
1	MacNaughton Jones,	Brit. Med. Journ., Dec. 19, 1874.	Improved	Surgical	×	×	×	...	Treated by MacNaughton Jones with setons and zinc chlorid. Pupils dilated; right eye more prominent.
2	Gauthier,	Lyon Médicale, 1888, 22.	"	"	×	×	×	...	Cyst emptied and injected with iodin; seven years afterward gland enlarged again, and symptoms returned.
3	Fraser,	Edinb. Med. Journ., 1887, xxxiii, p. 347.	"	True	×	×	×	10 yrs.	First noticed palpitation and flushings; eighteen months afterward struma, dysphagia, dyspnea. Partial extirpation. Lister operator.
4	Tillaux,	Bull. Acad. de Méd., 1880, 17.	Well	Surgical	×	o	×	...	Extirpation of cystic goiter. Weakness of sight; dyspnea. Trendelenburg doubts diagnosis.
5	Bomsier,	Thèse d'Aggregation de Paris, 1880	"	"	×	×	...	...	Hematic cyst treated by Ollier with caustics.
6	Tillaux,	Bull. de la Soc. Chirurg., 1881.	" (?)	"	×	×	×	...	Sarcoma; extirpation; death afterward from recurrence.
7	Bénard,	Contrib. à l'Etude de Goitre Exoph. Paris, 1882.	"	Doubtful	...	...	...	...	Extirpation.
8	Bénard,	" " "	"	"	...	...	...	...	Extirpation.
9	Bénard,	" " "	"	"	...	...	...	...	Cauterization and seton followed by shrinkage and cure.
10	Bénard,	" " "	"	Surgical	...	...	...	...	Sarcoma; treated as previous case; no details given.
11	Rehn,	Berl. klin. Wochen., 1884, 11.	"	True	×	×	×	1½ yrs.	Palpitation first, followed by goiter; heat-flashes; dyspnea. Total extirpation.
12	Rehn,	" " "	"	Doubtful	×	×	×	1 yr.	Hyperidrosis, heat-flashes, dyspnea, tremor. Extirpation.
13	Rehn,	" " "	Improved	"	×	o	×	...	Sensations of heat and cold, general nervousness. Partial extirpation.
14	Mikulicz,	Wien.med.Wochen. 1886, 1–4.	Well	Surgical	×	×	×	3 yrs.	Resection. Goiter very large; dyspnea.
15	Weidemann,	Dissert. Berlin, 1886	"	"	×	×	×	...	Dyspnea; pupils dilated. Extirpation of right and middle lobes.
16	Josipovici,	" " 1887	"	True	×	×	×	6 yrs.	Operator Wolff. Struma came after exophthalmos and palpitation; struma small; dyspnea, hyperidrosis. Extirpation of one-half.
17	Josipovici,	" " 1887	Improved	Doubtful	×	×	×	...	Ultimate result?
18	Dubrueil,	Gaz. de Paris, 1887, 34.	Well	Surgical	×	×	×	...	Goiter cystic, no pulsation, pupils dilated. Enucleation of cyst.
19	Frank,	Berl. klin. Wochen., 1888.	Death	Doubtful	×	?	×	...	Death from operation.
20	Frank,	" " "	Unimproved	"	×	×	×	...	Exophthalmos increased after operation.
21	Kümmel,	Deutsche med. Wochen., 1890,438	Improved(?)	"	×	×	×	6 wks.	
22	Leucke,	Schmidt's Jahrb., 1890, 138.	Well	True	×	×	×	7 mos.	Palpitation and dyspnea first, then struma. Extirpation of one-half of gland.
23	Leucke,	" " "	"	"	×	×	×	6 mos.	Exophthalmos first, struma afterward. Extirpation of one-half of gland.
24	Rupprecht	" " "	"	"	×	×	×	...	Struma appeared three years after palpitation. Extirpation of one-half.
25	Gausen,	" " "	Unimproved	Doubtful	?	?	?	...	Reported in discussing the previous case. Details not given.
26	Gausen,	" " "	"	"	?	?	?	...	
27	Leucke,	Deut.med.Wochen., 1892, No. 11.	Death	"	×	×	×	...	Death from pulmonary edema.
28	Leucke,	" " "	Well	Surgical	×	o	×	...	Struma large; dyspnea, pulmonary tuberculosis complicating. Extirpation of one-half.
29	Leucke,	" " "	"	Doubtful	×	o	×	...	Extirpation of one-half.
30	Dreesmann,	" No. 5 "	"	True	×	×	×	2 yrs.	Struma appeared after palpitation; tremor, hyperidrosis. Ligation of vessels by Kocher.
31	Dreesmann,	" " "	Improved	"	×	×	×	1 yr.	Exophthalmos, then struma and palpitation. Ligation of vessels by Trendelenburg. One year later still slight struma and exophthalmos.
32	Dreesmann,	" " "	"	Doubtful	×	×	×	...	Ligation of vessels by Trendelenburg.
33	Stierlin.	Beiträg. z. klin. Chir. 1892.	Well	True	×	o	×	1½ yr.	Palpitation before struma; tremor; no Graefe's sign. Extirpation of one-half.

No.	Reported by	Reported in	Result.	Nature of case.	Struma present	Exophthalmos present	Tachycardia present	Reported after	Remarks.
34	Stierlin,	Beiträg. z. klin. Chir. 1892.	Well	Doubtful	×	×	×	1½ yr.	Tremor; no Graefe's sign. Extirpation of one-half.
35	Stierlin,	" " "	"	"	×	o	×	1 yr.	Tremor, dyspnea. Improvement slow. Complete extirpation of one-half.
36	Frank,	" " "	Improved	"	×	×	×	...	Dyspnea. Extirpation of one-half.
37	Wette,	Arch. f. klin. Chir., Bd. 44, p. 785.	"	True	×	×	×	4½ mos	Some exophthalmos still existed, though patient greatly improved. Operator Rehn. Extirpation partial.
38	Wette,	" " "	Well	Doubtful	×	×	×	5 yrs.	Struma for years, afterward exophthalmos and palpitation. Extirpation partial. Operator Riedel.
39	Wette,	" " "	Improved	"	×	×	×	3 yrs.	Struma for ten years; struma cystic; still some exophthalmos. Extirpation partial. Operator Riedel.
40	Wette,	" " "	Well	"	×	×	×	2 yrs.	Struma very large, tremor, hyperidrosis, dyspnea. Extirpation partial. Operator Riedel.
41	Determeyer,	Deut.med.Wochen., 1893, iii, 16.	Improved(?)	True	×	×	×	1 yr.	Pulse still 82–90. Graefe phenomenon still present. Partial extirpation by Rotter.

the struma was not the first of the classic triad to appear, and, with one exception, those in which goiter, exophthalmos, and tachycardia were all present. As "doubtful" I have classed the remaining cases when the history reported would not warrant my including them even under such arbitrary heads as the others. Classed as cases of "true Graves' disease," there were then eleven, of which seven were reported cured; and as cases of "surgical Graves' disease," were ten, of which nine were cured; and as "doubtful cases," were twenty, of which nine were cured. If we assume the doubtful cases to have been instances of true Graves' disease, we have thirty-one cases, of which sixteen were cured, that is about 50 per cent.

The duration of the cure must greatly interest us. Unfortunately, there is nothing mentioned of this in many of the reports. Only once is there mention of recurrence, and this was in the case reported by Gauthier, already mentioned. This was probably not a case of "true Graves' disease." Three cases are reported as being well five years or more after operation, two after three years, two after two years, three after one and a-half years, one after seven months, and one after six months.

From the study of these cases, it seems evident to me that whether the term "surgical" be appropriate or not, in the development of large tumors of the thyroid gland of whatever nature there may arise a symptom-complex very similar to, if not identical with, true Graves' disease. In two of the cases the goiter was reported as sarcomatous, in five as cystic, and in several as very vascular; in the greater number of cases, all description of the nature of the goiter is omitted.

I certainly believe that cases of true Graves' disease have been greatly relieved of their symptoms by operation; perhaps some of them have been cured.[1] It seems to me unwarrantable to draw positive conclusions as to the pathology of Graves' disease from the results of these operations alone; in fact, it seems almost as difficult to do so in those cases of the so-called "surgical" form. Josipovici,[2] Weidemann,[3] and others conclude that, inasmuch as the extirpation of one-half of the tumor was followed by disappearance of the symptoms, the symptoms were due to pressure from it. How frequently does the surgeon observe goiters of large size which have exerted such pressure on the organs of the neck that the functions of breathing and swallowing have been almost abolished, and yet the sympathetic has escaped pressure in some wonderful way; these cases present no symptoms of Graves' disease. The symptom that, according to Eulenburg and Gowers, speaks strongly in favor of pressure on the sympathetic, pupillary dilatation, is found reported three times only in our forty-one cases; yet a considerable number of the goiters are reported as of large size. How equally inconsistent with the pressure-theory are those cases presenting all of the symptoms of Graves' disease in a marked degree, but in which the struma was by no means the first of the

[1] During the discussion of this paper it was suggested that the test of the cutaneous resistance to the electric current might be a good test of the completeness of the cure after operation; this has, to my knowledge, been tried by no one as yet.

[2] Josipovici: Zur Therapie d. Morb. Based. Dissert., Berl., 1887.

[3] Weidemann: Kropfextirp. im Augusta Hosp. Dissert., Berl., 1886.

symptoms to appear, and even never equalled a peach in size. To bring our mystification to a climax, then, the extirpation of one-half of such a struma is followed by the disappearance of all the symptoms.

Rehn,[1] in his first publication on the subject, after reporting favorable results from four operations, suggested that the symptoms of Graves' disease may be reflex manifestations on the part of the sympathetic nerve-endings in the thyroid gland. Hack[2] afterward reported a cure of Graves' disease by nasal operation, and since this several others have recorded similar success. Hack's case was one of typical Graves' disease in a patient afflicted with chronic hypertrophic rhinitis; repeated cauterization was followed by cure of the Graves' disease, as well as the rhinitis. Hack's inference in this case is similar to Rehn's, in so far as he believed a continued irritation of the end-organs of the sympathetic in the nasal mucous membrane to underlie the nervous symptoms and the goiter.

Möbius,[3] after calling attention to the similarity between Graves' disease and myxedema, cretinism and the cachexia strumipriva, all of which are supposed to depend upon pathologic inactivity of the thyroid gland; and after noting that signs of Graves' disease may appear in the course of any goiter, and that operative measures upon the goiter often succeed in materially influencing the Graves' disease, comes to the conclusion that the principal underlying cause of Graves' disease is a morbid change in the functional activity of the thyroid gland; the cause of this morbid activity he acknowledges to be entirely unknown, but suggests its being an intoxication. Wette[4] comes to a similar conclusion, though by the much less logical reasoning that as the removal of the goiter is followed by disappearance of the nervous symptoms, the goiter must be the etiologic factor underlying the Graves' disease.

One factor, however, which occurs to me as worthy of consideration in this connection has failed being mentioned by any of these authors; I refer to the effect of the operation *per se*, aside from anything akin to suggestion. It strikes me that a certain analogy exists, in this relation, between epilepsy and Graves' disease. The fact that many cases of exophthalmic goiter seem to date directly from the occurrence of a bodily injury, mental excitement or shock, and that we have no positive proof, as yet, that the strumectomy has achieved a lasting cure in Graves' disease, greatly strengthens, for me, at least, this similarity. After considerable search in the literature I have failed to find anything referring to the effect of general surgical operations on the course of Graves' disease. Experience in this connection might be expected to aid us materially in our consideration of the subject.

Gowers[1] gives 25 per cent. as the proportion of cases of true Graves' disease cured or brought to a standstill by non-operative methods. In his last report of 250 cases of all kinds of goiter, Mocher gives a mortality from strumectomy of 1.8 per cent.; it is true that his first cases of Graves' disease (a report of which in detail I have not been able to find) were attended with a greater mortality than his other strumectomies. He expresses the conviction, however, that with our present improved methods of operating, exophthalmic goiter should be no more dangerous to operate upon than the others, and I think that the results reported since his publication bear this out. When we consider the slight danger to life from the operation, if carried out according to the most improved principles; and when we consider the favorable results thus far obtained by surgical treatment, it seems to me that in cases of true Graves' disease of such severity as to seriously harass the patient, and when the other methods have failed to arrest the progress of the disease, operative interference is indicated. In cases of the so-called "surgical" kind, or in any case in which the goiter is of sufficient size to cause stenosis of the trachea or esophagus, the indications for operation will be self-evident. However this may be, we can regard the operation for true Graves' disease, as yet, only as empirical; all the more is it important, therefore, that future cases be reported with utmost care in the details. As far as the choice of operation is concerned, I shall have little to say. The operation at present almost exclusively performed is the extirpation of one-half of the gland, usually the larger half being chosen. The superior and inferior thyroid arteries are tied as a preliminary step and the isthmus is divided between ligatures. Ligature of the thyroid arteries alone might well come up for consideration; however, three cases only have been reported, one as well, and the other two as improved. Total extirpation, practised as it was at first, is at the present day, of course, out of the question.

Although we can scarcely exclaim with the enthusiasm of a recent German author that "henceforth Basedow's disease belongs in the surgical ward," the surgeon's past work in this field has certainly merited encouragement. We shall express the hope that future experience may result in further justification of the surgical treatment, so that increase of knowledge may convert what is now an empirical procedure into one thoroughly rational.

[1] Rehn: Berl. klin. Woch., ii, 1884.
[2] Hack: Deutsche med. Woch., xxv, 1886.
[3] Möbius: Deut. Zeitschr. f. Nervenheilk., Bd. i, Hefte 5 u. 6.
[4] Wette: Langenbeck's Arch., Bd. lxiv, p. 788.

[1] Gowers: loc. cit.

A STUDY OF THE "ORGANIC EXTRACTS" "CEREBRINE" AND "CEREBRIN."

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THE announcement made by Dr. W. A. Hammond in an article entitled "On Organic Extracts, their Preparation and Physiological and Therapeutical Effects," which appeared in the *New York Medical Journal*, of January 28th last, was not altogether a surprise, as Constantine Paul, taking the cue from Brown-Séquard, had been pursuing a parallel train of investigation. Abstracts or reprints of the same article were published in nearly all of the medical journals in the United States and Canada; a paper of like character even found place in the *North American Review*.

Having pretty thoroughly investigated the claims of the Brown-Séquard Fluid—which so far as evidence was concerned, appeared to possess some basis of truth, but when subjected to careful and prolonged control, proved an utter failure aside from psychic influence—I had sufficient curiosity to examine into the claims of "Cerebrine" (Hammond) and, likewise, "Cerebrin" (manufactured by Parke, Davis & Co.), as both alike rest upon the same presumptions, as promulgated in the medical and general press.

Dr. Hammond's claims, which apply equally to "Cerebrin" (Parke, Davis & Co.), are as follows:[1]

"Five minims of this extract constitute a hypodermatic dose.

"The most notable effects on the human system of a single dose are as follows, though in very strong, robust, and large persons a somewhat larger dose is required, never, however, exceeding ten minims:

"1. The pulse is increased in the course of from five to ten minutes, or even less in some cases, by about twenty beats in a minute, and is rendered stronger and fuller. At the same time there is a feeling of distention in the head, the face is slightly flushed, and occasionally there is a mild frontal, vertical, or occipital headache, or all combined, lasting, however, only a few minutes.

"2. A feeling of exhilaration is experienced which endures for several hours. During this period the mind is more than usually active and more capable of effort. This condition is so well marked that if the dose is taken about bedtime wakefulness is the result.

"3. The quantity of urine excreted is increased, when other things are equal, by from eight to twelve ounces in the twenty-four hours.

"4. The expulsive force of the bladder and the peristaltic action of the intestines are notably augmented—so much so that in elderly persons in whom the bladder does not readily empty itself without considerable abdominal effort this action is no longer required, the bladder discharging itself fully and strongly, and any existing tendency to constipation disappears, and this to such an extent that fluid operations are often produced from the rapid emptying of the small intestine.

"5. A decided increase in the muscular strength and endurance is noticed at once. Thus I found in my own case, that I could 'put up' a dumb-bell weighing forty-five pounds fifteen times with the right arm and thirteen times with the left arm, while after a single dose of the extract I could lift the weight forty-five times with the right arm and thirty seven times with the left arm.

"6. In some cases in elderly persons increase in the power of vision is produced and the presbyopic condition disappears for a time.

"7. An increase in the appetite and digestive power. Thus, a person suffering from anorexia and nervous dyspepsia is relieved of these symptoms, temporarily at least, after a single dose hypodermatically administered.

"These effects are generally observed after one hypodermatic injection, and they continue for varying periods, some of them lasting for several days. The most notable effects are seen in the general lessening of the phenomena accompanying advancing years."

With the coöperation of Dr. George Suttie, and also a personal friend deeply interested in scientific matters, who is the manager of a large manufacturing establishment, I was able to secure, on three different days, twelve men for experimental purposes. These men voluntarily submitted to the ordeal, without any knowledge whatever of the medicaments employed, further than might be conveyed by the assurance that no danger would arise therefrom; they, moreover, during the interval between the hourly recording of pulse, temperature, etc., pursued their ordinary avocations, all being of the class denominated "laboring," some employed at very heavy work; many, moreover, were obliged to climb a flight of stairs to reach the room wherein the experiments were conducted.

The fluids employed in each case were: 1st. "Cerebrine" (Hammond) in original packages, as obtained from the Columbia Chemical Co.; 2d. "Cerebrin" (Parke, Davis & Co.) in original packages; 3d. A mixture of my own, composed of 38 parts of borax, 42 parts of glycerin, and 40 parts of water.

One dozen of Hicks' thermometers with Kew certificates were obtained, and these, moreover, specially rated preparatory to experimentation, and the ratings carefully considered and verified after each individual test.

A new hypodermatic syringe was set apart for each fluid, and long before the experiments, and during the same, kept constantly immersed in absolute alcohol.

The three fluids had very nearly the same specific gravity, and the same general appearance.

EXPERIMENT NO. 1, TABLE 1.—Dose of each fluid employed, five minims, hypodermatically.

Four men numbered respectively 1, 3, 10, and 11, and aged twenty-three, thirty-seven, thirty-five, and twenty-six years, all receiving "Cerebrine" (Hammond).

At 7 A.M., prior to receiving injection, No. 1's respiration was 17; temperature, 98.5°; pulse, 86. At 8 A.M., forty-five minutes after injection, tem-

[1] New York Medical Journal, January 28, 1893.

perature, 99°; pulse, 76. At 1 P.M., respiration, 15,; temperature, 98.6°; pulse, 76. At 7 P.M., respiration, 14; temperature, 98.5°; pulse, 64. Averages for the day, respiration, 15.33; temperature, 98.554°; pulse, 76.15.

At 7 A.M., prior to receiving injection, No. 3's respiration was 16; temperature, 98.7°; pulse, 78. At 8 A.M., forty-five minutes after injection, temperature, 99°; pulse, 76. At 1 P.M., respiration was 16, temperature, 98.5°; pulse, 72. At 7 P.M., respiration, 16; temperature, 98.5°; pulse, 72. At 7 P.M., respiration, 16; temperature, 98.5°; pulse, 66. Averages for the day, respiration, 16; temperature, 98.56°; pulse, 69.538.

At 7 A.M., prior to receiving injection, No. 10's respiration was 18; temperature, 98.6°; pulse, 88. At 8 A.M., forty-five minutes after injection, temperature, 98.5°; pulse, 80. At 1 P.M., respiration, 18; temperature, 98.5°; pulse, 76. At 7 P.M., respiration, 18; temperature, 98.5°; pulse, 68. Averages for the day, respiration, 18; temperature, 98.516°; pulse, 73.380.

At 7 A.M., prior to receiving injection, No. 11's respiration was 15; temperature, 98.7°; pulse, 88. At 8 A.M., forty five minutes after injection, temperature, 98.7°; pulse, 66. At 1 P.M., respiration, 16; temperature, 98.5°; pulse, 82. At 7 P.M., respiration, 16; temperature, 98.5°; pulse, 82. Averages for the day, respiration, 15.66; temperature, 98.546°; pulse, 82.769.

The averages for all who received "Cerebrine" (Hammond) were: At 7 A.M., before injection, respiration, 16.5; temperature, 98.625°; pulse, 85. At 8 A.M., forty-five minutes after injection, temperature, 98.8°; pulse, 79.5. At 1 P.M., respiration, 16.25; temperature, 98.525°; pulse, 76.5. At 7 P.M., respiration, 16; temperature, 98.5°; pulse, 70.

It is unnecessary to go over these tables seriatim, as they speak for themselves. It will be seen that Nos. 4, 6, 7, and 12 received "Cerebrin" (Parke, Davis & Co.), and Nos. 9, 2, 5, and 8, a solution of borax, glycerin, and water.

"Cerebrin" (Parke, Davis & Co.), gave very little variation in results from those yielded by "Cerebrine" (Hammond), not enough to be of value on comparison. The third fluid was practically as effective as the two preceding. In no instance was the average temperature increased to the amount of 0.07 of a degree, and the highest average temperature reached was that of No. 12, with "Cerebrin" (Parke, Davis & Co.).

In connection with this it may be well to remark that the slight acceleration of pulse which occurred at the beginning of the experiments, and which was noticed as much before the injection as afterward, was due, probably, to some slight mental doubt on the part of those experimented upon. But the innocuous character of the experiments was pretty well known throughout the concern where these men were employed before the day was over, hence, as a consequence, the second day's experimentation, as shown by Table No. 2, witnessed considerably less variation.

EXPERIMENT No. 2. TABLE No. 2.—Dose, ten minims each of "Cerebrine" (Hammond); "Cerebrin" (Parke, Davis & Co.), and solution of borax in glycerin and water.

It will be observed that the average respiration at 7 A.M., prior to receiving injection, for those receiving Hammond's fluid, was 17.75; temperature, 98.5°; pulse, 80. At 8 A.M., forty-five minutes after the ingestion of the fluid, the temperature was in no instance elevated, and the average pulse had fallen to 72.5. At 1 P.M. the total average respiration was 18; temperature, 98.525°; pulse, 72.25. At 7 P.M., the respiration was 16.75, temperature 98.5°, pulse 69.

EXPERIMENT No. 3. TABLE No. 3.—Dose, fifteen minims each of "Cerebrine" (Hammond); "Cerebrin" (Parke, Davis & Co.), and solution of borax in glycerin and water.

The twelve individuals experimented with on this occasion were selected from those of the two previous experiments. Nos. 1, 3, 9, 8, 6, 12, and 10 being respectively Nos. 3, 2, 8, 9, 1, 12, and 5 of the second experiment, and Nos. 4, 7, 5, 2, and 10 were respectively Nos. 12, 11, 4, 2, and 5 of the first experiment.

Practically the same ratio as in the two preceding experiments obtained.

Further, as to all three experiments, the claims made by Dr. Hammond were in no instance borne out either as to pulse, respiration and temperature, exhilaration, flushing, wakefulness, increased quantity of urine, expulsive force of bladder and peristalsis of the intestines, increased muscular strength, increased power of vision, or increased appetite and digestion.

In addition to all this, I myself ingested on various occasions doses varying from five minims to one-half ounce of both "Cerebrine" (Hammond) and "Cerebrin" (Parke, Davis & Co.), without any appreciable effect; and so far as the assertion that a dose of "Cerebrine" (Hammond) induces insomnia is concerned I am obliged to dissent. One-half ounce ingested at 8.30 P.M. did not in the least influence sleep, which was profound an hour and a half later.

There is but one conclusion to be formed, viz., that "Cerebrine" (Hammond), "Cerebrin" (Parke, Davis & Co.) so-called, and a solution of borax in glycerin and water, are equally efficacious —or rather equally inert for good or evil.

TABLE I.—TUESDAY, JUNE 6, 1893. DOSE 5 MINIMS OF EACH FLUID.

No.	Fluid.	Age.	Respiration.	7 A. M.		8 A. M.		9 A. M.		10 A. M.		11 A. M.		12 M.		Respiration.	1 P. M.		2 P. M.		3 P. M.		4 P. M.		5 P. M		6 P. M.		7 P. M.		Respiration.	Total summary.		
				Temp.	Pulse.	Temp.	Pulse.	Temp.	Pulse.	Temp.	Pulse.	Temp.	Pulse.	Temp.	Pulse.		Temp.	Pulse.	Temp.	Pulse.	Temp.	Pulse.	Temp.	Pulse.	Temp.	Pulse.	Temp.	Pulse.	Temp.	Pulse.		Resp.	Temp.	Pulse.
1	Cerebrine, (Hammond)	23	17	N.	86	+.5	76	N.	76	N.	68	+.1	68	N.	64	15	+.1	76	N.	68	N.	70	N.	62	N.	72	N.	68	N.	64	14	15.33	98.554°	70.615
3		37	16	+.2	78	+.5	76	+.2	86	N.	78	N.	70	N.	64	16	N.	72	—.1	70	N.	68	N.	64	N.	66	N.	66	N.	66	16	16	98.560	69.588
10		35	18	+.2	88	N.	80	N.	80	+.1	72	N.	70	N.	70	18	N.	76	N.	72	N.	70	N.	68	N.	64	N.	76	N.	68	18	18	98.516	73.380
11		26	15	+.1	88	+.2	86	+.2	86	N.	84	N.	82	N.	76	16	N.	82	N.	84	N.	78	N.	82	N.	82	N.	84	N.	82	16	15.66	98.546	82.769
Average summary		30.3	16.5	98.625	85	98.8	79.5	before injection at 1 P. M.								16.25	98.535	76.5	at 7 A. M										98.5	70	16	16.247	98.544	74.075
4	Cerebrin (P.D.& Co.)	25	18	N.	64	—.5	56	N.	60	N.	62	+.5	64	—.1	64	19	+.1	70	N	70	N.	68	N	64	N.	62	N.	70	N.	69	18	18.33	98.500	64.840
6		46	18	+.2	68	N.	80	N.	80	N.	76	N.	80	N.	84	19	N.	82	N.	82	N	82	N.	78	N.	80	N.	82	N.	82	18	18.33	98.515	81.230
7		42	16	N.	68	+.5	64	N.	70	N.	70	N.	74	N.	68	15	—.1	70	N.	70	N.	64	N.	60	N	62	N.	62	N.	64	15	15.33	98.530	66.615
12		34	18	+.1	84	N.	84	+.2	88	N.	84	N	80	N.	88	17	N.	86	N.	86	N	88	N.	88	N.	88	N.	88	N.	86	18	17.66	98.523	86.008
Average summary		36.9	17.5	98.575	76	98.5	71	before injection at 1 P. M.								17.5	98.5	77	at 7 P.M.										98.5	75.25	17.25	17.412	98.517	74.672
9	Borax 35	26	17	+.1	76	+.5	80	N.	58	N.	54	N.	62	N.	58	16	N.	68	N.	68	N.	60	N.	56	N.	58	N.	58	N.	56	18	17	98.546	62.461
2	Glycerin 42	47	19	—.2	80	N.	70	—.1	68	+.2	74	—.2	70	—.1	64	19	N.	70	N.	80	—.1	74	N.	78	N.	84	N.	86	+.2	82	18	18.66	98.477	75.384
5	Water 40	34	14	+.3	55	N.	84	N.	84	+.2	60	N.	80	N.	76	15	N.	82	N.	86	N.	78	N.	76	N.	76	N.	78	N.	78	14	14.33	98.538	76.384
8	—M.	35	15	+.2	82	N.	76	N.	70	N.	76	N.	74	+.2	70	16	N.	78	N.	84	N.	76	N.	76	N.	76	N.	82	N.	80	14	15	98.53	76.923
Average summary		35.6	16.25	98.6	73.25	98.62	77.5	before injection at 1 P. M.								16.5	98.5	74.5	at 7 P. M.										98 55	74	16	16.25	98.522	72.788

TABLE II.—WEDNESDAY, JUNE 7, 1893. DOSE 10 MINIMS.

No.	Fluid.	Age.	Respiration.	7 A. M.		8 A. M.		9 A. M.		10 A. M.		11 A. M.		12 M.		Respiration.	1 P. M.		2 P. M.		3 P. M.		4 P. M.		5 P. M.		6 P. M		7 P. M.		Respiration.	Total summary.		
				Temp.	Pulse.	Temp.	Pulse.	Temp.	Pulse.	Temp.	Pulse.	Temp.	Pulse.	Temp.	Pulse.		Temp.	Pulse.	Temp.	Pulse.	Temp.	Pulse.	Temp.	Pulse.	Temp.	Pulse.	Temp.	Pulse.	Temp.	Pulse.		Resp.	Temp.	Pulse.
2	Cerebrine (Hammond)	36	18	N.	104	N.	88	N.	84	N.	84	N.	86	N.	78	16	N.	76	N.	76	N.	82	N.	78	N.	70	N.	72	N.	72	17	17	98.5	80.769
6		29	20	N.	72	N.	70	N.	80	N.	76	N.	80	N.	76	18	N.	70	N.	72	N.	74	N.	72	N.	70	N.	72	N.	77	18	18.66	98.5	73.923
9		22	16	N.	70	N.	72	N.	70	N.	80	N.	80	N.	82	18	N.	84	N.	88	N.	82	N.	84	N.	78	N.	78	N.	70	16	16.666	98.5	78.307
11		36	17	N.	74	N.	60	N.	58	N.	56	N.	54	N.	56	20	+.1	59	N.	60	N.	65	—.2	59	N.	60	N.	58	N.	57	16	17.666	98.492	59.692
Summaries		30.9	17.75	98.5	80	98.5	72.5									18	98.525	72.25											98.5	69	16.75	17.50	98.498	73.172
1	Cerebrin (P.D.& Co.)	28	18	N.	74	—.1	66	N.	64	N.	80	N.	76	N.	72	19	N.	76	N.	80	N.	78	N.	74	N.	68	N.	66	N.	70	19	18.666	98.492	72.615
5		31	17	N.	84	N.	74	N.	66	N.	80	N.	78	N.	66	15	N.	80	N.	74	N.	72	N.	68	N.	69	N.	69	N.	68	16	16	98.5	72.923
7		34	18	N.	80	N.	80	N.	84	N.	80	N.	82	+.5	82	16	N.	84	+.8	92	N.	79	N.	78	N.	78	N.	78	N.	78	18	17.333	98.6	81.153
8		31	16	N.	70	N.	62	N.	66	N.	60	N.	66	N.	63	14	N.	72	N.	82	N.	66	N.	68	N.	62	N.	61	N.	66	14	14.666	98.5	66.461
Summaries		31	17.25	98.5	77	98.48	70.5									16	98.5	78											98.5	70.5	16.75	16.666	98.523	73.288

TABLE II.—WEDNESDAY, JUNE 7, 1893. DOSE 10 MINIMS—*continued.*

No.	Fluid.	Age.	Respiration.	7 A. M. Temp.	7 A. M. Pulse.	8 A. M. Temp.	8 A. M. Pulse.	9 A. M. Temp.	9 A. M. Pulse.	10 A. M. Temp.	10 A. M. Pulse.	11 A. M. Temp.	11 A. M. Pulse.	12 M. Temp.	12 M. Pulse.	Respiration.	1 P. M. Temp.	1 P. M. Pulse.	2 P. M. Temp.	2 P. M. Pulse.	3 P. M. Temp.	3 P. M. Pulse.	4 P. M. Temp.	4 P. M. Pulse.	5 P. M. Temp.	5 P. M. Pulse.	6 P. M. Temp.	6 P. M. Pulse.	7 A. M. Temp.	7 A. M. Pulse.	Respiration.	Total summary. Resp.	Total summary. Temp.	Total summary. Pulse.
3	Borax 35	25	13	N.	84	N.	80	N.	80	N.	82	N.	84	N.	72	12	N.	76	N.	84	N.	70	N.	64	N.	70	N.	63	N.	58	14	13	98.5	74.384
4	Glycerin 42	35	14	N.	82	N.	64	—.2	62	N.	60	N.	66	N.	64	18	N.	72	N.	74	N.	68	N.	68	N.	62	N.	67	N.	69	16	16	98.485	67.538
10	Water 40	34	20	N.	88	N.	74	N.	77	N.	76	N.	84	N.	84	19	N.	86	N.	84	N.	80	—.2	70	+.3	78	N.	80	N.	76	18	18	98.507	79.769
12	—M.	28	16	N.	74	N.	68	N.	66	+.1	72	N.	78	N.	72	16	N.	70	N.	72	N.	68	N.	70	N.	64	N.	76	N.	71	16	16	98.507	70.846
	Summaries	30.6	15.75	98.5	82	98.5	71.5									16.25	98.5	76												98.5	68.5	16	16	98.499	73.134

TABLE III.—JUNE 13, 1893. DOSE 15 MINIMS.

No.	Fluid.	Age.	Respiration.	7 A. M. Temp.	7 A. M. Pulse.	8 A. M. Temp.	8 A. M. Pulse.	9 A. M. Temp.	9 A. M. Pulse.	10 A. M. Temp.	10 A. M. Pulse.	11 A. M. Temp.	11 A. M. Pulse.	12 M. Temp.	12 M. Pulse.	Respiration.	1 P. M. Temp.	1 P. M. Pulse.	2 P. M. Temp.	2 P. M. Pulse.	3 P. M. Temp.	3 P. M. Pulse.	4 P. M. Temp.	4 P. M. Pulse.	5 P M. Temp.	5 P M. Pulse.	6 P. M. Temp.	6 P. M. Pulse.	7 P. M. Temp.	7 P. M. Pulse.	Respiration.	Total summary. Resp.	Total summary. Temp.	Total summary. Pulse.
1	Cerebrine (Hammond)	25	16	N.	75	N.	72	N.	72	N.	70	N.	68	N.	70	13	N.	74	N.	70	N.	73	N.	72	N.	70	N.	66	N.	64	12	13.666	98.5	70.461
3		36	14	"	76	"	72	"	75	"	66	"	70	"	76	15	"	80	"	72	"	68	"	68	"	72	"	68	"	68	"	68	13	14.	98.5	71.615
4		34	18	"	74	"	74	"	72	"	76	"	75	"	78	17	"	76	"	74	"	74	"	74	"	74	"	74	"	78	"	78	18	17.666	98.5	75.153
7		26	15	"	87	+.2	82	"	80	"	70	"	78	"	78	16	"	80	"	80	"	78	"	78	"	78	"	76	+.1	76	"	77	16	15.666	98.523	78.461
	Summary	30.3	15.75	93.1	78	98.55	75									15 25	98.5	77.5												98.5	71.75	14.75	15.25	98.506	73.922
9	Cerebrin P.D.& Co.)	31	13	N.	66	N.	70	N.	70	N.	62	N.	64	N.	69	16	N.	70	N.	70	N.	65	N.	66	N.	62	—.2	59	N.	60	19	16.000	98.484	65.615
5		25	18	"	60	"	58	"	56	"	56	"	52	"	64	19	+.2	80	"	74	"	72	"	68	"	64	N.	63	"	59	18	18.333	98.515	63.538
8		22	15	"	74	"	70	"	71	"	78	"	76	"	76	16	N.	78	"	77	+.3	78	"	72	+.4	80	"	78	"	80	19	16.66	98.553	76.000
6		28	17	"	82	"	78	"	78	"	70	"	74	"	72	20	"	72	"	77	N.	72	"	74	—.2	77	"	72	"	72	21	19.333	98.484	74.615
	Summary	26.6	15.75	98.5	70.5	98.5	69									17.75	98.55	75												98.5	67.75	19 25	17.58	98.509	69.939
2	Borax, Glycerin, Water,	47	19	N.	62	N.	62	N.	62	N.	64	N.	56	N.	64	19	N.	68	N.	72	N.	70	N.	68	N.	66	N.	64	N.	61	18	18.666	98.5	64.538
12		28	16	"	67	"	68	"	70	"	70	"	70	"	68	18	"	72	"	72	"	72	"	73	"	72	"	68	+.2	66	18	17.333	98.515	69.846
10		25	17	"	79	+.2	78	"	76	"	75	"	71	"	62	16	"	70	"	70	"	68	"	66	"	62	"	62	N.	59	17	16.666	98.515	69.077
11		34	24	"	90	N.	88	"	88	"	80	"	84	"	84	22	"	"	"	84	"	80	"	84	"	82	"	82	"	"	84	22	22.666	98.5	84.307
	Summary	33.6	19	90.5	74.5	98.55	74									18.75	98.5	74												98 55	67.5	18.75	18.833	98.507	71.942

CATHETERIZATION OF THE FALLOPIAN TUBES.[1]

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IN a paper read at the last annual meeting of this Association I alluded to some personal experience in catheterizing the Fallopian tubes, or, more accurately speaking, in making direct medicinal applications to the interior of those appendages. The subsequent interest and favorable comment elicited, together with the widespread disbelief in the possibility of such procedure, revealed by investigation into the literature of the subject, have impelled me to a further brief consideration of the matter at the present time.

In the course of my experimental ventures I had no thought of experiences either specially unique or particularly novel, thinking the procedure a natural result of an acceptance of the modern theory of contagion and continuity, as applied to the etiology of tubal disease, and antisepsis and drainage in its therapeutic relationship. I was surprised to find, on investigation, so great a dearth of literature on the subject. In all the leading text-books, society Transactions, and periodic literature at my command, nothing whatever on the subject is even hinted at, except in Dr. Henry C. Coe's article on "Anatomy of the Female Pelvic Organs," in the *American System of Gynecology*, in which he says, briefly: "Catheterization and cauterization of the tubes, as proposed by Tyler Smith and Froseip, are of course of no practical value, not to speak of the difficulty and danger of the procedure." In the great work of Pozzi reference to the matter is made also as follows:

"Is it possible to pass the sound into the Fallopian tubes? This is the explanation of some authors in those cases where the instrument penetrates deeply into the abdomen, and can be detected through its wall. That this may occur there must be a combination of very unusual circumstance—a latero-version of the uterus, which brings the orifice of the tube into the long axis of the cervix, and an exceptional wideness of its opening. This condition actually existed in a case observed by Bischoff, and was verified after death following ovariotomy. But in almost every one of the published cases of pretended sounding of the tubes, it is far more likely that there was a perforation of the uterus—a condition which is easily produced without exaggerated efforts when the uterus is softened and thinned from pregnancy or recent abortion, or when it is displaced. The benign character of such wounds has surprised most of those who have witnessed their production, and has induced them to seek an explanation which appears more plausible. This is without doubt the significance which must be given to two cases recently reported by Gonner, of Basel. Finally, we may note the possibility of establishing permanent false passages, and the introduction of the sound by the same route into the abdominal cavity. But these are, in truth, but pathological curiosities, with which we have very little to do."

Thus it will be seen that Pozzi expresses his doubts, not only as to the reliability of evidence offered, but even as to the possibility of such a procedure, except as revealed by post-mortem examination. If the latter opportunity had never manifested itself, he would probably never have accepted the evidence of the observer quoted in that connection. If the circumstance, indisputably proved, occurred once, may it not occur a second time, and if so, a third, and so on, as attention should be more particularly turned to the matter? Facts are oftentimes not discovered, simply because they are not sought for. The fact that the normal uterus and appendages present positions and conditions usually not favorable to the passage of a foreign body into their cavities, does not militate against the possibility of differing conditions in cases of disease and malposition.

Whatever may be the published or unpublished experience and views of others, however, I feel that I am in a position to take successful issue with those who think the difficulties of the manipulation insurmountable and the procedure impractical. There is not the least particle of doubt in my own mind as to the accuracy of conclusion of those who have reported accidental entrance of the sound into the Fallopian tube. I feel that I might go still further, and say with a degree of propriety equal to that of the author quoted, that the instances of perforation of the uterine wall without apparent effort were in all probability instances of unconscious catheterization of the Fallopian tubes. To my mind, the one insinuation is just as fair and well-founded as the other.

As many as fifteen years ago, whilst endeavoring to outline a submucous fibroid growth of the uterus, I found my sound pass at once to an unusual depth, and in great trepidation and alarm I put my patient to bed, fortified with opiates and prospective cold applications, under the impression that a perforation of the uterus had been made and peritonitis was to be feared. There was no development of inflammatory symptoms, however, and I classed the case in the category of those referred to by the author quoted, considering it an evidence of the tolerance manifested by the, at other times, intolerant peritoneal tissue. There was not even pain, and the patient persisted in the declaration that there was nothing the matter with her, and would not remain quiet. Some time later, in a case of hemorrhage, a similar occurrence took place with respect to the passage of

[1] Read before the Illinois State Medical Society, May, 1893

the sound, without any resulting untoward symptoms, although the patient was not put to bed but only admonished to keep quiet and report at once the development of pain or the like. About four years ago another case presented in the person of Mrs. K., a butcher's wife, large and stout, who had not been pregnant for half a dozen years, although anxious to become so and desirous of knowing the reason for her barrenness. I passed a small sound, quite gently, and was surprised to find that with but slight manipulation the instrument largely disappeared in the direction of the left cornu, evidently entering the abdominal cavity. Somewhat startled, I at once withdrew the instrument, with perfect ease, and inquired of the lady if she had suffered any pain from my manipulations. She assured me that she had not, and after plucking up more courage and giving the matter some thought I reintroduced the sound, not only into the uterus but likewise to a greater distance and in the same direction as before, and with equal ease and freedom from pain or distress. Somewhat emboldened by the apparent harmlessness of the venture, I cautiously manipulated the instrument with one hand, and by palpation with the other, alternately internally and externally, I satisfied myself that I had succeeded in introducing the sound into the left Fallopian tube. The woman left my office and returned to her home as well as usual. When she again called, at my request, my curiosity led me to a still further trial of the matter, with a like result, and with the additional one of passing the small sound, with some difficulty, however, into the right tube as well. This passage of the sound I have repeated a number of times in this patient, completely establishing the perfect feasibility, in some cases at least, of catheterization of the Fallopian tubes. This patient is yet within my reach and I can demonstrate on her, to the satisfaction of anyone, I think, the possibility, in certain cases, of introducing even a large sound into the Fallopian tube, through the normal uterine passage, and with little more than the slight curve usually characterizing the uterine sound. In the instance just mentioned the uterus is large, straight, somewhat retroverted, and the cervical canal large and roomy. Patient has never become pregnant.

One other marked case of this type came under my observation about one year and a half ago, in the person of a Jewess who, at that time, presented all the evidences of a tubal pregnancy. Menstruation had been suppressed for three months, and the enlargement, plainly distinguishable in the right uterine cornu and broad ligament, satisfied me that I had to do with a partial extra-uterine pregnancy. Hemorrhage, fitful in character, soon supervened and increased with such rapidity and severity that I was obliged to dilate the uterus and remove from its right cornu and tube-entrance what proved to be the product of conception, with the closely adherent placenta partly projecting, as I think, into the tubal cavity. At all events, a large uterine sound could be easily passed into the tube, and a smaller one with comparative readiness into the left one. The same manipulation can be accomplished at the present time, as I yet have the patient under my care for a constant discharge evidently emanating from the right tube and dating from the period of the pregnancy just recounted, and which I have thus far been unable to wholly control even by the use of injections of hydrogen dioxid, which are readily given, the fluid, however, passing into the peritoneal cavity if used in quantity, occasioning some pain and distress.

I have no doubt that some of my experience has been duplicated in the observation of others, and I hope that this account may serve to bring out such reports, even if a supposed mistaken diagnosis, or timidity in the face of authority, has thus far prevented this.

Since the experiences detailed, I have sought to embrace nearly every suitable opportunity to try the experiment of catheterization, and particularly so since the introduction of the practice of uterine drainage and therapeutic antisepsis. In a fair proportion of cases I have been enabled to do so successfully. I not only make this claim, but stand committed to a willingness to demonstrate the feasibility of the procedure, in suitable cases, to the satisfaction of anyone who cares to take the pains to corroborate what I say by personal observation.

All medical men will perhaps acknowledge the demonstrable egress and ingress of fluids in relation to the patulousness of the utero-tubal opening. What, then, is there to hinder the introduction into such opening of a suitable instrument? In a direct way, manifestly only the normally small diameter of the orifice. If this obstacle can be overcome in any way, serious interference with the procedure can be expected only in one or both of two directions, viz., the possible existence of a valve-like membranous enclosure, or, such relation of the angle of tubal insertion to the entrance axis of the uterus as to make the cavity of the tube inaccessible, no matter what its lateral dimensions.

Let us consider this matter for a moment. The regular triangular shape of the uterine cavity is presented, with the uterine os at one, and the respective tubal openings at the other two, of these angles. There is no special difficulty, even in strictly normal uteri, in reaching either tubal angle through the cervical opening. The only possible hindrances then to the procedure under consideration are those just referred to. That they are not always present is evidenced by the observations of myself and

others, just detailed. That they may be in many cases artificially overcome is equally demonstrable. The variation in size of the tubal meatus in different individuals, and under differing circumstances and conditions, and the mobility and adjustability of all the organs concerned, including the dilatability of the uterine os, render it possible to temporarily adjust positions and harmonize axes to an extent equal to most emergencies. It is unnecessary in this connection to go further into a description of anatomic conditions with which all intelligent physicians are familiar.

On subjecting a patient to the ordeal of an attempted catheterization of the Fallopian tubes, I am in the habit, as stated in my former paper, of first passing a small-sized sound, and with its bulbous point locate the ultimate limit of the tubal angle of the uterus. This is followed by the injection-tube of a Molesworth uterine dilator, which I have found in extremity to be a very efficient instrument for the purpose, bent to correspond to the shape of the withdrawn sound. This tube is made to follow the mental calculation as to direction marked out by the sound. If no entrance can be readily effected, a calculation based upon careful examination of relative positions must be made as to the necessity for dilating, or trying to change the relationship of the uterus, so as to admit of a proper adjustment of opening to opening. In at least a fair proportion of cases care and perseverance will be rewarded by a success demonstrable in all fulness by the injection of some innocuous fluid that will either distend the tube to an appreciable extent, or occasion an abdominal pain of sometimes circumscribed and at other times diffused character, but harmless. Really, one who has never tried it will be astonished to find with what ease entrance can occasionally be made, particularly in some cases of relaxed uteri and profuse, though simple leukorrheal discharge. It is not claimed that this desirable accession can be secured in all, or even in a majority of cases, but only that there are many in which the procedure can be accomplished, and that, too, with the greatest benefit from a therapeutic point of view. In fact, the practical value of these observations lies in their therapeutic relationship; and that does not necessarily mean either free drainage, cauterization, or the introduction of dangerous medicaments. It means more in the line of modern therapeutics and specific medication. It means sterilization in the sense of the exclusion or destruction of morbid entities and products; etiologic factors of continuous septic infection and diseased tissue-change, and subsequent reliance upon the restorative energy of the natural processes. It means a rational and conservative therapeusis in which is recognized the legitimacy of drainage and other antiseptic precautions in the treatment of diseases of the endometrium, and the logical sequence of following diseased conditions beyond that boundary into a well-recognized field of morbid activity.

My observations in this direction have not as yet carried me very far. Two classes of cases, however, clinically speaking, I have been enabled to treat with the greatest satisfaction by catheterization and injection into the Fallopian tubes. When there exists a persistent leukorrheal discharge of a catarrhal type, even in unmarried women, which even intra-uterine medication fails to control, I have often been enabled to stop it entirely by the use of injections of hydrogen dioxid into the Fallopian tube; for the fact is demonstrable that it is in just this very class of cases that the tubal meatus is found to be most patulous. It is not necessary that the injection-tube be introduced more than through the isthmus in order to accomplish the desired purpose. Beyond that point the increasing diameter of the Fallopian tube readily admits of the exudation of the hydrogen dioxid through the small eyelets near the end of the catheter I have mentioned. The other class of cases referred to is that in which we find intermittent discharges of pus from the uterine cavity, those cases in which the patients give a report of more or less frequently recurring "ruptures" of "ulcers" or "abscesses"—"breaking" of them, as they sometimes say. Unquestionably these are cases of pyosalpinx in which the distal extremity of the tube has been closed by adhesions, whilst the uterine end is yet not sufficiently occluded to bear the strain of accumulating pus. In my experience, a goodly number of these cases can be successfully treated in the manner indicated, in combination with other conservative measures that might be dwelt upon. Of course, when much disorganization is present, or a series of cavities has formed, or when the ovary itself is diseased to the extent of disorganization, no reliance should or can be placed upon the procedure now under consideration. What I wish mostly to urge is this: That the Fallopian tubes are far more frequently amenable to catheterization than is generally supposed, and that therefore, in the light of modern therapeutics, a persevering and intelligent study of the subject will do much to remove one of the opprobria of medical art and add laurels to truly scientific conservatism.

For the Pains of Chronic Rheumatism.—

℞.—Acid. arseniosi . . . gr. iij.
Pulv. guaiaci . . . . ʒiij.
Pulv. capsici . . . . ʒss.
Pulv. aloes et asafœtidæ . . ʒiij.—M.
Ft. pil. no. cxx.
S.—One thrice daily.

The Practitioner.

TWENTY-EIGHT CASES OF DIPHTHERIA, WITH ELEVEN DEATHS, DUE TO AN INFECTED MILK-SUPPLY.

BY FRED. B. APPLEGET,
SPECIAL HEALTH-INSPECTOR, OF HIGHTSTOWN, N. J.

THE epidemic of diphtheria that appeared in Hightstown, N. J., in July, 1893, was, in many respects, a remarkable one. From its suddenness, its virulence, and the quickness with which it abated, it has excited widespread interest, and has been deemed especially noteworthy as a signal case of the spreading of disease through the medium of milk, and of the immediate and almost complete extinction of the epidemic by cutting off the infected supply. Hightstown is a village of some 2000 inhabitants, and lies in one of the most healthful parts of Mercer County. There had been occasional cases of mild diphtheria in the town during the year, and one death from the disease on June 17th, but the first case of the epidemic in question appeared on July 18th, the patient being a young boy of fifteen years. Other cases appeared almost simultaneously, and at the end of the week a total of twenty-eight patients had been reported. Of these six died. The first two deaths occurred on the 22d, one of them being the boy first attacked. One death followed on the 23d, one on the 24th, and one on the 25th. In the next week two deaths occurred on the 26th, one on the 28th, one on the 29th, and one on the 30th. One other victim of the epidemic was an infant, whose parents took it to Eatontown on the 17th, to escape the disease, but who sickened, and died on the 28th. The total number of deaths was eleven, all of them being among the patients stricken in the first week of the epidemic. Outside of those who were prostrated by the disease in that period there have been but seven cases reported, all being persons known to have been directly subjected to contagion from original cases.

The fatality was in the main among children, the oldest person that died being a young lady of nineteen years, the youngest a babe of fifteen months. The average age in the fatal cases was about eight years.

On the 25th the attention of the local Board of Health was first called to the fact that there was a striking coincidence between the course of the epidemic and the milk-route of one dairyman, but no action was taken in the matter until Dr. G. Clark Hunt, Inspector of the State Board of Health, visited the town on the following day. Investigation showed that, although the people of the town bought milk from six different dairymen, every case of diphtheria reported was in a family that used the suspected milk. In one instance, in which the adults of a family used this milk, and the children drank milk from another dairy, two of the adults had diphtheria, while the children were perfectly well. The sanitary condition of the town while not perfect, was found to be very good, and the cases were almost all in the most cleanly families, had sprung up in the healthiest parts of the town, and were widely scattered. In the opinion of Inspector Hunt the milk-route was the only possible connection between them, and he immediately ordered that further sale of the milk be prohibited. Developments have proved that his theory was correct, and all the local physicians are positive in their belief that the milk undoubtedly was the source of the epidemic.

Further investigation disclosed the fact that a German boy who washed cans and did the milking at the dairy in question had on the 22d called on a local physician, who found the boy's throat covered with membranous patches. He pronounced the case diphtheria. The boy had been ailing for several days, and it is supposed that while at work he contaminated the milk, and that in this congenial soil the germs rapidly multiplied and infected the entire supply. An additional fact that strengthens the theory is that of the only two other cases known out of the village, one was the daughter of the dairyman and the other his niece, a neighbor.

A striking feature of the case is that the sick boy, who is supposed to have caused the epidemic, was not seriously ill at any time. When the doctor examined him his tonsils were covered with pseudo-membrane, but it soon disappeared after a little treatment, and he was not confined to his bed at all. It, therefore, appears that this most malignant epidemic originated in a case of "walking diphtheria." Naturally, there are theories that the milk was infected by diseased cows or unwholesome food given them, but the herd has been pronounced by experts to be in fine condition at present, and there is little doubt that the disease came from the boy.

As regards the individual cases, the disease does not seem to have had any features to distinguish it from other epidemics of malignant diphtheria, beyond its remarkable virulence and the slowness with which the patients recovered. In fatal cases the longest time of sickness was seven days, and the average was about four. In most of the patients the disease first manifested itself by nausea, pains in the limbs and head, and high temperature. Then followed the appearance of the diphtheric membrane, in many cases covering not only the tonsils, but also the roof of the mouth and the nares. In almost every instance death was caused by toxemia, although there were several cases of asphyxia. When the disease resulted fatally, death was generally preceded by a deceptive rallying of the patient, and several who, only a few hours before were thought to be recov-

ering, died suddenly. Convalescence was remarkably tedious, the patients giving evidence of great loss of vitality. In the few cases caused by contagion the disease assumed a very mild form. At present there are no serious cases.

CLINICAL MEMORANDA.

THERAPEUTIC NOTES.

BY SOLOMON SOLIS-COHEN, M.D.,
PROFESSOR OF CLINICAL MEDICINE AND APPLIED THERAPEUTICS IN THE PHILADELPHIA POLYCLINIC; ONE OF THE PHYSICIANS TO THE PHILADELPHIA HOSPITAL, ETC.

IV.

Levulose in Diabetes.—Attracted by the favorable reports of German observers, I have for more than a year been administering levulose to diabetic patients. I shall elsewhere publish a detailed report of my observations. In these notes it will suffice to say that in nine cases, including different types of the affection, I have found that levulose may be administered in moderate quantities to diabetic patients without increasing the excretion of sugar or of acetone in the urine; and in some cases with a diminution of the quantity of sugar excreted. For example, to a patient who had for some time been excreting about four ounces of dextrose daily, one or two ounces of levulose were given daily for three weeks, and the excretion of dextrose fell to less than three ounces. Diminution of thirst and gain in weight were concomitantly observed. In cases attended with emaciation, the substance should be administered in quantities to be determined according to the amount of sugar excreted, and the influence exerted upon the nutrition, as shown by the body-weight. In other cases it may be used as a sweetening agent. The greatest drawback to its use is its comparative costliness; the commercial product, to which unfortunately a trademark name has been attached by the proprietors, retailing at present for about three dollars a pound. This, however, is a great reduction from the cost of levulose when Kuelz first advised its use twenty years ago. One hundred dollars a pound was prohibitory.

Strontium Bromid is one of the newer drugs that has held its place. I have used it constantly for nearly two years, and find it to deserve the encomiums of the French observers who reintroduced it into medicine. In a few instances in which I failed to specify the imported salt, patients complained that the medicine produced nausea and gastric pain. On dispensing the pure drug from a quantity obtained by myself from the manufacturers' agents, the complaint was not repeated. It is necessary, therefore, to specify a preparation known to be pure; and after using a number of brands, I have returned to that made in Paris, and with which the experiments of Paul, See, and others, and my own first observations were conducted. I usually give the drug in solution according to the following formula, known in the House Pharmacopeia of the Philadelphia Polyclinic as "mistura strontii bromidi composita":

Strontium bromid, pure, .	1½ ounces.
Glycerin	2 fluidounces.
Infusion of gentian . .	10 fluidounces.

Dose—From two to four fluidrams (fifteen to thirty grains of strontium bromid) before meals.

Strontium, one of the chemic group termed "alkaline earths," appears to have a special action upon the gastric mucous membrane. It increases appetite, promotes digestion, and favors nutrition. It is a distinct sedative in the case of irritability of the stomach.

In cases of chronic gastric catarrh, with a tendency to vomiting, in the nausea and vomiting of alcoholism, and in the indigestion of pulmonary tuberculosis, strontium has been more than ordinarily useful. In gastro-duodenal catarrh, and in intestinal indigestion of painful type, I have given it with some pancreatic preparation, one and a half or two hours after meals. Thus: Liquor pancreaticus, 2 fluidrams; strontium bromid, 15 grains; water, 2 fluidrams. I have likewise employed it with great benefit as an alkaline medicament in the treatment of lithemia. Its sedative effect as a bromid was especially marked in one case of lithemic dyspepsia associated with glycosuria, in which persistent insomnia had led to a distressing sulfonal-habit. By using it in doses of thirty grains during the day, and giving one or two doses of sixty grains at night, with occasional additional resort to hyoscin hydrobromate, the sulfonal-habit was broken up; and as general improvement took place, the insomnia disappeared, and the doses of strontium bromid were reduced. As a bromid, when the drug is to be employed for prolonged periods and in full dosage, the strontium salt is to be preferred in most cases to the potassium or the sodium salt, as it interferes less with nutrition.

I have observed good effects in epilepsy from the conjoint use of calcium and strontium bromids. I have elsewhere reported in some detail my personal observations of the beneficial action of strontium bromid in diabetes and the glycosuria of lithemia. I have found it useful in nephritis of the gouty type, and in the albuminuria associated with lithuria and oxaluria; in three cases of other varieties of nephritis and albuminuria I have used it faithfully, but without appreciable result.

Strontium Lactate has been advised for many kinds of gastric disturbance. I have employed it alternately with the bromid, in combination with the bromid, and alone in some cases in which I did not wish to give any bromid. It has not seemed to me to be fully equal to the bromid in gastric or lithemic cases. I have not used it in diabetes or neurotic cases. In nephritis it failed in the same cases wherein the bromid failed.

Strontium Iodid has been well borne in a few cases of asthma and of syphilis in which sodium iodid, potassium iodid, and hydriodic acid produced unpleasant effects. It failed to be tolerated in one case in which hydriodic acid was afterward successfully employed.

Strontium Benzoate, Strontium Acetate, and Strontium Salicylate should theoretically be useful, but I have not been able to obtain these salts for clinical study.

Sulfonal.—While it is now well recognized that sulfonal occasionally produces unpleasant symptoms, yet the sulfonal-habit and the bad effects of that habit have not as yet received the full attention that they merit. My own experience with the unpleasant effects of sulfonal is limited to three cases; though I have seen other cases in which I suspected sulfonal to be one of

the morbid factors, but could not ascribe any definite symptoms to it. Theoretically, any drug capable of the therapeutic and toxic effects known to be produced by sulfonal should be dangerous if its use be long-continued.

The first case, elsewhere reported, was that of a man slowly dying with pulmonary tuberculosis, in whom sulfonal, given as a hypnotic, produced, instead of quiet sleep, a "fighting delirium." The second case was that of the man alluded to in the note on strontium bromid. He had been taking from fifteen to thirty grains of sulfonal nightly for nearly two years. He professed himself to be unable to sleep without it. His urine was irregular in quantity, but, as a rule, scanty, high-colored, containing urates and phosphates in excess, uric acid, and occasionally sugar. He complained of great pain in the lumbar region; but was principally distressed by mental symptoms, irritability of temper, headache, confusion of ideas, and loss of memory. He had originally been given sulfonal by his physician for loss of sleep during the excitement of a political campaign; and had continued using it on his own responsibility. It is true that the complications of the case prevent an unqualified affirmation as to the part played by the causative action of any one pathogenetic factor, but a careful study of the patient and of the effect of remedies, convinced me that the scantiness of the renal secretion and a part of the mental failure were to be attributed to the long-continued influence of sulfonal.

The third case was that of a highly neurotic woman with pulmonary tuberculosis, who had been using sulfonal in doses of from ten to thirty grains at irregular intervals for an indefinite number of years—probably from the time of its first introduction. Whenever she had headache or whenever she failed to sleep soon after going to bed, she would take a powder. In this case also, without any evidence of nephritis, there was marked failure and irregularity of renal activity. The patient was querulous, forgetful, untruthful, confused, semi-delirious, the subject of delusions, and finally delirious, stuporous, and comatose. Here, too, there was difficulty in separating the symptoms of the disease and its complications from those due to the sulfonal-habit, but a study of all of the circumstances impressed me with the conviction that sulfonal was largely responsible for the distressing symptoms attending the close of this sufferer's life.

A fourth case may be cited as illustrative of a large number in which the evidence was less clear than in those previously mentioned. The patient was a "sexual hypochondriac," with lithemic symptoms and much-disturbed mentality. He had been using sulfonal for eighteen months, and likewise professed inability to sleep without it. The urine would be scanty for days, then profuse, light-colored, and of low specific gravity. He seemed better for a while after withdrawal of the sulfonal, but like most patients of his class became dissatisfied, and when last heard of was under the care of the fourth physician whom he had consulted in six months.

Dr. John W. Branham, a surgeon in the United States Marine-Hospital Service, died on August 19th of yellow fever, at Brunswick, Ga., whither he had been detailed for the purpose of suppressing a local outbreak of the disease.

DOES PHENACETIN POSSESS CONVULSIVANT PROPERTIES?

BY H. ILLOWAY, M.D.,
OF CINCINNATI, O.

CAN phenacetin cause convulsions?

CASE I.—July 30th, 1892, I was called to see E. S., a girl, eighteen years old, well developed and rather corpulent. She is a native of Russia, and has been in this country about a year. For some months after her arrival here she was troubled with amenorrhea. She is now employed in a cloak-making establishment and works very hard. In the afternoon of the day mentioned she was seized with a very severe headache and went home. I saw her at 5 P.M. She complained of intense headache; her cheeks were somewhat flushed; her tongue was very much coated; the thermometer in the axilla indicated a temperature of 101° F. I prescribed one powder of phenacetin, gr. v, to be taken as soon as obtained. About 7.30 P.M., I was summoned in haste to the patient. She had had a violent convulsion. Whilst I was talking to her she had another convulsive seizure; it was a well-defined, typical, hystero-epileptic convulsion. I prescribed tincture of valerian in ℥ss doses and ordered a large clyster with milk of asafetida. The spasms recurred at short intervals and I endeavored to arrest them by pressure over the ovaries. This maneuver was successful to the extent that each individual spasm was cut short. As soon as she felt a seizure coming on, she would cry out, "Hold me, or press tighter," referring to the abdominal pressure.

Finally after several doses of valerian had been taken and the enema had acted several times, the spasms ceased about 11 P.M. To prevent a recurrence of the attacks I directed a dose of chloral hydrate.

The next morning I learned that there had been no recurrence of the convulsions after I had left. She was very much prostrated, and I sent her to the Jewish Hospital, where she remained four weeks, with no particular ailment—only great weakness. An examination there disclosed an infantile uterus.

I have since learned that she had had convulsions some years previously, though of what character I could not determine.

CASE II.—On August 3, 1892, I was called to see Mrs. T., thirty years of age, five feet in height, fairly well developed, the mother of three children born with easy labors. My visit was made nine days after confinement, the woman having been up and about from the seventh day. She complained of feeling badly; she had chills, with numbness of the tips of the fingers, coldness of the feet, and an uncomfortable feeling about the head. She had a languid, weary expression; her tongue was coated with a white fur; the appetite was abolished; she had some tremor, and a temperature of 101½° F. I prescribed:

℞.—Quininæ sulphat. . . . . grs. ijss.
Extr. gentian. . . . . gr. j.
Pulv. piper. nigr. . . . grs. ij.
Solut. Fowleri . . . . gtta. ij.
M. ft. mass. et ft. pilul. no. j. Dispens. tal. pilul. no. x.
Sig.—1 pill ter in hora.

Next morning, about 9 o'clock, I visited her upon call.

She complained of violent headache; the temperature was 101° F., and she felt generally bad. I prescribed:

℞.—Phenacetin. . . . . gr. v.
Caffein. . . . . gr. j.
M. ft. pulv. no. j; to be taken at once.

At her request I promised to return at 11 A.M., at which hour she complained of feeling bad. Whilst I was talking to the nurse, making some inquiries about the bowels, urine, etc., she got out of bed and walked toward me, with her hands held in front of her, like a person walking in the dark, and complained that she could not see and that she felt frightful. We had no more than put her back into bed when she was seized with a very severe, typical hystero-epileptic convulsion of considerable duration. As soon as she recovered therefrom she passed a quart or more of urine very pale in color and light in specific gravity. Potassium bromid in large doses was administered. Two further seizures of equal severity followed in rapid succession. After this there was no recurrence. For six weeks after this Mrs. S. was not well, suffering from indefinable feelings in her head which produced great mental depression, almost melancholia, insomnia, etc. Gradually, however, she made a perfect recovery. I learned later that on the eighth day after her confinement, at the circumcision of the little boy, something had occurred that had agitated her greatly and had set her in fear of the occurrence of something untoward

Studying these cases subsequently the question naturally presented itself: "Was the spasmodic seizure in these two cases due to the phenacetin, or was the administration of this remedy only an incident in the history of the cases, with no part in the causation of the convulsive phenomena?"

Taking into consideration the well-established fact that phenacetin is almost innocuous, and that it can be, and is, administered in much larger doses without producing untoward effects, the latter view might be taken, it being assumed that all the necessary conditions for the development of a convulsive seizure were already present at the time of the administration of the drug, and that this would have occurred even if the medicine had not been given. This would be a very plausible explanation if we had but Case I, in which we have a history of the occurrence of convulsions at some previous time, to contend with; but we have also Case II, and here we have no history of convulsions at any antecedent period; furthermore, I have known the lady for nine years, and never, to my knowledge, did she manifest any symptom of hysteria or spasm. In this case we certainly have no grounds upon which to base the assumption of the existence of the conditions necessary to the development of a hystero-epileptic attack prior to the administration of the phenacetin.

A scrutiny of the two histories discloses the following points of similarity:

I. Elevation of temperature.

II. Intense headache.

III. Administration of five grains of phenacetin and the development two hours thereafter of an hystero-epileptic spasm.

IV. Marked physical prostration and mental depression following the attack and continuing for some time.

Taking all the facts, here set forth, in consideration, the conclusion seems inevitable that the phenacetin was the active agent in the causation of the convulsions.

If this conclusion be correct, what was the *modus operandi*? In experimental investigations with antipyrin and resorcin, substances belonging, with phenacetin, to the same chemical group—"carbon compounds of the aromatic series,"—convulsive phenomena were developed in the trial-animals,[1] and with resorcin in man.[2] It is thus established that in sufficiently large doses, this group of chemical agents may act as convulsivants. Now, it does not appear far-fetched to assume that under certain circumstances a state of the system is developed in which even the very mildest of this category of compounds, the most innocuous, even if given in small doses, may act as a toxic agent and cause convulsions. Such an assumption is fully justified by the accumulated experience with other and various powerful agents of the Pharmacopeia.

There is, however, another explanation possible. The rapid lowering of the temperature by phenacetin may have been the cause of the accumulation in the cerebral centers of a surplus of nervous irritability, and as the result of this accumulation a nervous explosion, a convulsion, ensued.

It is true that no facts, even remote, can be cited in support of this hypothesis; nevertheless it merits consideration upon the following ground: It is a well-established fact that the onset of a febrile movement is usually marked by a chill or a rigor, which is undoubtedly due to disturbance of the nervous equilibrium; furthermore, in very young children we frequently have convulsive seizures taking the place of the chill or rigor. Now, reasoning by analogy, it can be rather readily supposed that just as well as a sudden elevation of temperature may be attended with marked nervous disturbance, so may also a rapid and forcible depression of the temperature be attended with sufficient nervous disturbance to result, under certain circumstances, in convulsions.

MEDICAL PROGRESS.

A Foreign Body in the Nose for Twenty-seven Years.—WARING (*British Medical Journal*, No. 1698, p. 117) has reported the case of a woman, thirty-one years old, who presented herself for nasal obstruction and a discharge from the left nostril, following upon an attack of influenza two and one-half years previously. The discharge, at first watery, later became thicker and yellowish, with an extremely offensive odor. There was no evidence of organic disease and none of syphilis or tuberculosis. Upon examination in strong sunlight the nasal cavity presented an appearance of decaying or necrosing mucous membrane, with yellow and gray sloughy patches, and indications of hyperemia. The opening was blocked by this conglomerate of decaying material and reddened vascular membrane. On passing a probe into the cavity a grating sensation was felt on the outer side and also posteriorly, and the further

[1] Baumann u. Preusse: Archiv f. Anatom. u. Physiolog., 1877.
[2] Maragliano: Centralblatt für die medic. Wissenschaft, 1884.

passage of the probe toward the pharynx was obstructed. By means of straight serrated forceps small spicules of dead bone and sloughing tissue were removed piecemeal from the outer side and floor of the cavity, as well as several polypoid growths of somewhat firmer consistence than clotted blood. Almost in a line directly backward and situated above and about the posterior nares was a movable mass that felt like dead bone. With some difficulty and manipulation this mass was grasped by the forceps and forcibly withdrawn through the left nostril. It was oval in shape, about as large as a filbert, and presented an irregular, gritty surface. On being broken up it was found to have for its nucleus a cherry-stone in perfect condition, around which was encrusted a layer of calcareous matter one-third of an inch thick, the whole mass measuring one inch in its longest diameter. A good deal of bleeding followed, but was controlled by irrigation with a solution of tannic acid. On inquiry, it was learned that at the age of four years the patient had introduced three or four cherry-seeds into the nose, but no discomfort had been felt until after the attack of influenza.

The Use of Curved Skin-incisions.—BEALE (*Lancet*, No. 3645, p. 84) gives the following reasons for preferring curved to straight skin-incisions: Curved incisions heal more rapidly, because there is really but one edge to the wound (that belonging to the flap) that is movable; moreover, the flap having been stitched to the neighboring skin or held away from the seat of operation, both edges of the wound are quite uninjured when the sutures are to be introduced. The resulting scar is smaller, although this is only of importance in certain parts, for the skin may be incised obliquely in making a curved incision, so that the epidermis at the edge of the flap is slightly in advance of the true skin. The curved incision fully exposes the parts to be operated on (assuming that the base of the flap is twice or three times its length) and gives the operator plenty of room in which to work. Suture of the edges is easier than in the case of a straight incision, especially if the skin be pricked in one or two situations exactly opposite one another before the incision is made, and often the curved wound is adapted to the shape of the part better than a straight one. The resulting cicatrix is not over the seat of operation. Drainage is often most perfect by inserting a tube through an incision in the base of some part of the flap, thus giving no hindrance to the primary union of the incision, and preventing any possible discharge from infecting the edges. Incision through inflamed or diseased skin can be avoided, and yet the disease be easily reached. There need be no tension upon the edges of the wound, as a flap of skin is, so to speak, loose, and if there is fear of tension, a thick silk suture may be passed through the base or some part of the flap and out again, and then through the skin on the opposite side of the incision, and there fixed, thus avoiding a long suture beneath either flap edge of the wound.

Acute Nephritis after Vaccination.—PERL (*Berliner klin. Wochenschr.*, No. 28, 1893, p. 674) has reported the case of a child, two and three-quarters years old, which was vaccinated for the first time. The child had been rachitic, slow in learning to walk, and had suffered a good deal with eczema, but at the time of the operation it was in perfect health and well nourished. Four days later the little one became restless, complaining of pains in the abdomen and back and appearing feverish. On the following day vesicles were visible at the site of vaccination. It was also noticed that the urine was scanty, turbid, brownish, and deposited a heavy sediment. On examination, its specific gravity was found to be 1016, and albumin in the proportion of ½ per cent. was detected, together with blood coloring-matter. Microscopic examination disclosed the presence of red and colorless blood-corpuscles and numerous hyaline, epithelial, and blood tube-casts. With rest in bed and a milk-diet these manifestations disappeared in the course of a week, and the child recovered perfectly. The vaccination pursued its usual course. Three other children that were vaccinated at the same time presented no abnormal manifestations.

Migraine with Recurrent Palsy of the Third Nerve.—At a a recent meeting of the Ophthalmological Society of the United Kingdom, SNELL (*British Medical Journal*, No. 1698, p. 118) reported two cases in which attacks of migraine were attended with paralysis of the third nerve. One case was in a man, twenty-seven years old, who had had attacks of migraine from the age of ten years, during the last seven of which the eye had been closed in the attacks. These occurred at first at intervals of about eight weeks, but subsequently every two or three weeks, and lasted three or four days. The palsy of the third nerve was practically complete, there being ptosis and paralysis of the ocular muscles, including dilatation of the pupil and palsy of accommodation. The attacks commenced with vomiting and headache. In the intervals between attacks the ocular palsy did not entirely disappear, the drooping of the lid growing progressively more nearly permanent. The second case was in a girl, eighteen years old, in which two attacks of palsy occurred at interval of four years, though outbreaks of migraine in the interval. On each occasion recovery was perfect. The affection is always to be monocular. The rapidity of recovery seems to bear an inverse ratio to the length of the interval.

The Administration of Anesthetics.—The following deductions (*Lancet*, No. 3642, p. 1498) have been arrived at by the Commission appointed by the *Lancet* to investigate from a clinical standpoint the subject of the administration of chloroform and other anesthetics: The death-rate under anesthetics has heretofore been unduly high, and may be lowered by improved methods and greater care. Ether is the safest anesthetic in temperate climes for general surgery, when properly given from an inhaler permitting graduation of the strength of the vapor. Nitrous oxid gas should be employed for minor surgery, and should replace chloroform in dental surgery. Chloroform is a comparatively safe body when given by a carefully trained person, but is not in any case wholly devoid of risk. No age or nation is free from danger under anesthetics. The perils of anesthesia, however slight, demand that the undivided attention of a duly qualified and trained medical man should be given to the administration of the anesthetic.

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PHLEGMONOUS PROCESSES ASSOCIATED WITH THE PRODUCTION OF GAS.

IT seems at first rather surprising that in view of the well-established facts connected with the bacteriology of the suppurative inflammations, surgeons should have remained ignorant of, and comparatively indifferent to, the nature of those destructive phlegmonous processes associated with the evolution of gas in the tissues. Fortunately, these "septic phlegmons," since the advent of the newer surgical technique, are among the rarer accidents that befall wounds; but despite this fact, the names Spreading Gangrene, Acute Emphysematous Gangrene, and *Gangrène foudroyante* (of MAISSONNEUVE) have by no means yet lost all their terrors.

On reviewing the literature it will be found that general credence has been given to the idea that phlegmons of this sort are dependent for their origin on particularly virulent varieties of the ordinary pyogenic bacteria, especially of the streptococcous pyogenes, and v. WINIWARTER has with some emphasis asserted that "no sharp line can be drawn between the diffuse suppurative and the diffuse septic phlegmons." As a matter of fact, when the tissues in cases of emphysematous gangrene were examined for bacteria, bacilli were always found, sometimes alone, sometimes associated with cocci, but these were almost invariably regarded as saprophytes, or bacteria of putrefaction, and looked upon as accidental contaminations of streptococcus-pus, in which they had found a suitable medium for saprophytic development (v. WINIWARTER, STIERLIN).

EUGENE FRAENKEL,[1] of Hamburg, has recently gone over this whole subject, and, through his bacteriologic investigations, has done much to clear up our knowledge of these processes, and to direct the further study of them along definite lines. He believes, and has, we think, proved that these gas-phlegmons possess a distinctive etiology quite independent of the suppurative inflammations, and calls attention to clinical evidence which alone seems almost convincing when once pointed out. The diffuse suppurative inflammations run their course with necrosis and pus-formation from the start; the diffuse "septic phlegmons" are associated with gas-development, and with softening and disintegration of the tissues. While the former may continue throughout without gas-formation, the latter, on the other hand, may lead to death without the slightest evidence of suppuration, although, as might have been expected, and as has now been demonstrated by cultural methods, *mixed* infections occur in which the development of gas may complicate a suppurative inflammation, or in which a secondary pyogenic infection may be superimposed upon a gas-phlegmon. The tardy appreciation of these conceptions of emphysematous gangrene is no doubt attributable to the deficiencies in the earlier bacteriologic methods, for the bacilli seen in the tissues and exudate could not be grown or isolated in pure culture, and so the application of the crucial test of inoculation-experiments remained impossible. After the introduction of the simpler methods of growing anaërobic bacteria, it became possible for these investigations to be more fruitful.

The idea of a separate etiology for the gas-phlegmons is by no means original with FRAENKEL, and he himself, in his monograph, refers to numerous attempts by others to settle the question. ROSENBACH observed two well-marked cases in which death occurred from gangrenous emphysema, one within six hours after an injury to the thigh, the other four days after an axillary operation. He saw what he called "emphysema-bacilli" in cover-slip preparations, but could not grow them. ARLOING described

[1] Ueber Gasphlegmonen. Hamburg and Leipzig, Leopold Voss, 1893. Pp. 1–56. 3 chromolith. pl.

a gaseous panophthalmitis following injury, from which he isolated a bacillus resembling the *vibrion septique*, and in 1891 LEVY (*Deut. Zeitschr. f. Chir.*, xxxii), from a pelvic abscess which contained gas, isolated, besides streptococci, a short, fine, non-motile bacillus. WILLIAM KOCH (*Deutsche Chirurg.*, Lief. 9) records seven cases, from one of which he claims to have isolated a bacillus identical in cultural properties and in pathogenic effects on animals with the bacillus of "symptomatic anthrax" (*Rauschbrand*), and calls the disease *Rauschbrand des Menschen*, but according to KITASATO and others, who have worked with this bacillus, his results must be doubted.

The careful bacteriologic examinations of WICKLEIN (*Virch. Archiv*, Bd. cxxv) are worthy of mention. From three cases he was able to separate a bacillus which resembled that of malignant edema, but which showed some points of difference from it. His experiments on animals were, however, almost entirely negative, only two guinea-pigs showing any disturbance after inoculation, and that only slight and temporary. CHIARI (*Prager med. Woch.*, 1893, No. 1) has described a fatal case of "septic emphysema" in a diabetic woman. He made both aërobic and anaërobic cultures, and separated the bacillus coli communis in pure culture. His experiments on animals were, however, negative, and it seems not unlikely that CHIARI had to deal with a mixed infection with the bacillus coli and a gas-producing bacillus, and that the latter was overlooked in working out the cultures.

FRAENKEL, to whose results we wish to call particular attention here, has had the opportunity of examining bacteriologically four cases of gas-phlegmon, two of them, indeed, following hypodermatic injections. From all of these he demonstrated on cover-slips, and was able to isolate by anaërobic plate-methods in pure culture, a short, plump, non-motile bacillus, with rounded ends, which stained well with all the ordinary bacterial dyes, and to which he has given the name *bacillus phlegmonis emphysematosa*. In one case this bacillus alone was found in the tissues; in a second it was associated with the yellow staphylococcus; and in the other two instances with the streptococcus pyogenes. He experimented on animals with pure cultures of the bacillus, and with mixtures of this bacillus with the ordinary pyogenic bacteria, in order to approach as nearly as possible to the mixed infections in the human being. Mice and rabbits were found to be insusceptible, but subcutaneous inoculation of guinea-pigs gave rise to a definite disease-picture, running its course in a typical way, with the development of gas in the subcutaneous and intermuscular tissues, accompanied by softening and disintegration of the muscles, and the outpouring of a hemorrhagic, dirty exudate. Some of the animals died with symptoms of severe constitutional disturbance; in others perforation of the skin ensued, with evacuation of the contents of the phlegmon, and final cure. Occasionally a peritonitis or pleuritis would be set up by extension. The "mixed infections" were more severe in guinea-pigs than the processes resulting from inoculation of the bacilli alone. The results of the histologic examination of the tissues of the animals experimented upon, and the relation of the bacteria to the tissue-lesions, we shall not speak of here. FRAENKEL differentiates his bacillus from the bacillus of *Rauschbrand*, the bacillus of malignant edema, and the "pseudo-edema bacillus" of LIBORIUS, but suggests that there may be several varieties of gas-bacilli, all capable of setting up emphysematous processes.

Without detracting at all from the value of these careful researches of FRAENKEL, it is necessary to direct attention to an oversight on his part, which becomes evident from his full description of the bacillus. The organism which he believes to have been before undescribed, has in reality been very fully studied in this country by WELCH and NUTTALL, and an epitome of their observations has already appeared in THE NEWS ("Pneumathæmia," Sept. 24, 1892, p. 357). A comparison of the original articles of the observers shows these two gas-producing bacilli to possess precisely similar cultural and morphologic properties, and there is every reason to believe that they are identical. The animal experiments were conducted differently, but so far as they were parallel their results agree. The bacillus of WELCH and NUTTALL, it will be remembered, was found in a patient suffering from aneurysm, in whom after death bubbles of gas were found in the heart and bloodvessels everywhere throughout the body. Not only on account of priority, but more by reason of its greater comprehensiveness, it would seem desirable therefore to retain for this gas-bacillus the name given it by WELCH, the *bacillus aërogenes capsulatus*.

The dangers lurking behind an ordinary hypodermatic puncture are well illustrated by two of the fatal cases of FRAENKEL, and it is interesting to note

that he succeeded in guinea-pigs in setting up a gas-phlegmon by simply contaminating a hypodermatic needle used for injection with a culture of the gas-bacillus.

Although FRAENKEL has, in view of the anaërobic nature of the bacillus, suggested that long and free incisions which allow the oxygen of the air to come in contact with the affected tissues may be of service, and that this treatment may be supplemented by the use of certain oxidizing agents (*e. g.*, solutions of potassium permanganate or hydrogen dioxid), we should still feel inclined to hesitate in preferring these measures to the older and perhaps more heroic method of early amputation, which has so long been advocated by our best surgeons. When amputation is impossible, however, as in emphysematous phlegmons of the head and trunk, these suggestions may be adopted as the best means at our command.

MEDICINE AND CITY NOISES.

NOT long since a foolish gentleman, who preferred to live in New York or not to live at all, committed suicide rather than to longer endure the ear-splitting noise of the bells of a neighboring church. In thousands of cases people are being made ill, are committing slow suicide, or are being painfully and slowly killed by useless city noises. Noise, then, becomes a question of health and of medical importance concerning which physicians should have a word to say and a duty to perform.

Scientifically, our rebellion against the noise-makers is founded upon the physiologic truth that rest is necessary to health, and that over-stimulation or persistent stimulation of any organ or of all organs is essentially pathogenic. HERBERT SPENCER secured for himself a sad sort of freedom from noise by a mechanical contrivance that held some kind of soft plugs or stoppers in the external auditory meatuses. If there were only some method whereby one could at will shut out unwelcome sound, as one can shut out the light from the eyes; if some aurist could devise an artificial method *à la* SPENCER, one that would not injure the ear, he would be a great benefactor to humanity. The evil done the few people that would thereby possibly be burned to death or otherwise injured would be small, as compared with that of the many deaths and much sickness due to noise.

Sociologically, the whole community has an unrecognized duty as regards noise that rests upon a physiologic and esthetic basis. Delicacy and accuracy of response to a physiologic stimulus are the characteristic marks of perfection in an organism. Whatever prevents this is against the welfare of society and progress. In this brutal noise-making era, one of two things must follow the ceaseless bruising of the mind by noise. Either the auditory mechanism, and the nervous mechanism with which it is related—that is, the whole mind—must become blunted in sensitiveness, crushed and stupefied; or it must react pathologically. People are, therefore, divisible into two classes: those whose nervous systems and minds are becoming mechanicalized, anesthetic, and brutalized, and those who, thus failing to kill sense and mentality, develop disease-reactions. The distinct agency of noise is to make us either savage or sickly. Civilization, of which noise-making is a decided component, is thus bearing in its bosom a self-poison, to its own undoing. We are losing all refinement and delicacy of the senses and are reverting to the condition of the barbarian whose senses had to be pounded and whipped into reaction, or we are becoming neurotic, hysteric, and neurasthenic. Generally and progressively, "Society" is either a crowd of the mentally stupid or of the hyperesthetically morbid, and social amusement is becoming a game of battering and spurring jaded and blunted senses, or of ministering to sense-diseases.

In the narrowest sense, we are medically bound to reduce the amount of noise-making, not only because noise engenders disease, but also because it prevents the cure of disease, or aggravates disease, very often, indeed, is the immediate cause of death. In an American city like Philadelphia there are something like 3000 needless deaths, and the equivalent of 6000 years of needless illness each year. What proportion of this waste of life is due to noise, it is, of course, impossible to say, but certainly a considerable proportion is chargeable to it. The sick are in private houses scattered all through the city, or in hospitals that are often located in the most densely crowded portions. Every physician knows how necessary quietness is to the sick, and how often noise has been the last baneful influence that the weakened organism could not resist, and thus the controlling and distinctive cause of failure to cure.

The recklessness of production and the unnecessariness of modern city noises are disgustingly astonishing. The worst of it is that they are even

kept up throughout the night. If the night, at least, were kept quiet, and the organism were thus given periods of repose, it would not be so impossible to preserve normality of sense-reaction and sanity of mental reaction. In Philadelphia one or a dozen drunken brawlers may make the night hideous with howl and curse and obscenity. Remonstrance with the policeman elicits a smile, with ill-concealed contempt for the remonstrant as a crank, and the avowal that he has no authority to interfere. In Philadelphia it is illegal for locomotive-engineers to blow whistles, and yet all night long sleep, at least in summer, is to healthy ears and minds impossible by reason of this ear-splitting curse. Street-car bells rung all the time (by horses or by wheels) are no protection to the public, and yet the public submits to the horrible nuisance. The laying of railway-tracks and the paving of streets at night are only necessary for the advantage and profit of mercenary corporations, and yet the authorities have no power, or do not assert it, to repress the evil. If our freedom-loving American submits to the dictation of his tyrant and master as to trolley-cars, his master puts down the new tracks at night, with fiendish noises, and will by and by run the cars with the still more fiendish and ceaseless noises.

From whatever aspect the subject be considered it seems strange that people will submit to the indignities of the noise-makers. A thousand are outraged in order that one or a few may possibly be benefited. The shrieking of whistles and the ringing of bells to notify workmen to stop or to start work is an instance in point. Everybody has a watch or a clock at hand. Why, then, blow the whistles? Why, also, thunder or jangle bells to tell people that should be asleep what o'clock it is during the night? The 10 per cent. of people who go to church must be warned by bells; but have the 90 per cent. no rights who do not need or heed; and what about the sick? The milkman arouses a whole neighborhood in delivering a quart of milk. The cartmen, the peddlers, the hawkers, the ragmen, etc., bawl and howl to be heard half a mile away if some other greater noise near by did not drown their voices. There are persons that think it strange that barking dogs and crowing roosters in a city should be objected to.

All noises may be divided into the necessary, the partially necessary, and the wholly superfluous. The makers of the last class of noises should be proceeded against in the interests of the public health by all the forces and with all the vigor at the command of physicians. And this by all odds is the largest and most injurious class of noises. Here is a work ready for the Associations for the Public Good. There is something particularly exasperating and baneful in the unnecessary noise in the very fact of its unnecessariness. Let all the loafing rowdies, howlers, hawkers, whistle-blowers, bell-ringers, and the rest be incontinently hushed, and especially if they carry on their diabolism at night.

Concerning the class of partly preventable noises of cities, the greater amount of them is connected with street traffic, and here arises the shameful need of good smooth pavements. As with the strawberry, so it is with the asphalt pavement—doubtless a better one could have been or may be invented, but doubtless it never has been invented. It is incomprehensible that people should consent to endure the torment arising from the stone and boulder pavements, and seemingly designed, like African music, for creating the most intolerable clatter possible. In addition to this aspect of the question there is another reason why, as physicians, we should do away with block and cobble-stone pavement: they are excellent culture-grounds for lodging filth and disease-germs. The asphalt pavement offers no such a nidus and can be easily flushed and kept clean.

The degree and character of the civilization of a country are indicated by the amount of unnecessary noise it endures, and this is accurately gauged by the condition of the pavements of its cities.

THE PAN-AMERICAN MEDICAL CONGRESS.

DESPITE the fact that a large number of medical associations and societies have held their meetings within the past few months, an examination of the programs of the various sections of the Pan-American Medical Congress shows that the best papers have been held for the great gathering of the physicians of all America, to be held in Washington, September 5th, 6th, 7th, and 8th. It is evident that everyone who is not absolutely prevented will find it greatly to his advantage to attend. Patriotism unites with Medicine to make the event of extraordinary importance. The splendid programs give certain promise that the meeting is to be primarily scientific in character and that medicine is not to be an excuse for unlimited social diversion. The officers of the

Congress have long heroically labored to bring about the success that is now beyond all question assured. Let everyone determine to add the one thing that will make assurance doubly sure—that is, his daily presence at the meetings of the section of his choice.

EDITORIAL COMMENTS.

The Reform of Chemic Nomenclature must be gradual and moderate, and inconsistencies will have to be tolerated during the process; yet whenever a single step forward can be taken without risk, it should be taken. Thus the proposition to shorten *phosphorus* to *phosphor* might safely be adopted; and, despite its inconsistency, phosfor would be still better, even if the commendable change to fosfor have to be yet longer postponed. So, too, the terms *sulfic* acid and *sulfous* acid, *phosfic* acid and *phosfous* acid, are better than *sulphuric*, *phosphoric*, etc., and equally intelligible.

In addition to the shortening of chemic names, some approach to uniformity in the terminations of the names of similar substances is highly desirable. The recent multiplication of new products has in many cases destroyed a previously existing uniformity. Particularly is this so in the case of the *ins* and the *ines*. If the final *e* be dropped from the names of alkaloids, as seems advisable, the termination *in* should likewise be dropped from the names of all substances but alkaloids. In the case of one group of substances now bearing this termination, namely, the enzymes, an admirable substitute is at hand in *ase*, as now found in *diastase* and *invertase*. We should thus have *pepsase*, *trypsase*, *amylopsase*, *rennase*, and *steapsase*. In the case of substances now termed *metabolins*, *toxins*, and the like, the termination *it* or *a* could be employed; *anabolit* or *pneumotoxa* would be as euphonic and as manageable as *anabolin* or *pneumotoxin*. As to fanciful names of drugs, anti-(this)in and ex(that)in, their entire suppression would be no loss. Names somewhat indicative of chemic composition, and not too long for every-day use, can be found. In order to avoid confusion, however, the changes should be recommended by an authorized body, and we would suggest the appointment of a commission by the American Medical Association to take up the whole subject of chemic nomenclature in so far as it affects medicine (*i. e.*, physiology, pathology, and pharmacology), and to submit a well-considered scheme for shortening and rendering uniform the terms used.

Prostitution in India.—The British Parliament prohibited licensed prostitution in India, but the startling fact is out that the law remains a dead letter, and that the military authorities have continued to perpetuate the essential characteristics of the license system, on the ground that half-suppressed vice would be more harmful to the men than legalized prostitution. The *Woman's Herald* says that the investigation carried out by two American women proves that "the whole horrible system of regulation, registration, and compulsory examination of the unfortunate women is in full force," under the command of Lord Roberts and his officers. The *Indian Medical Gazette*, in the face of the sad and perplexing problem, claims that there is only one cure—marriage—and adds the following: "Recognizing the awful consequences of forced celibacy upon our soldiery, coupled with the debasing and wrecking results of its military substitute—licensed prostitution—physicians must boldly declare against the continuance of what is distinctly proved to be unsanitary and sinful. They must vote for what is healthful and right, and therefore ennobling physically, mentally, and morally. Remove the State provisions made for unbridled lust, and put in their place lawful marriage. If the upkeep of married soldiers and their families in India is costly, the cost of invaliding the hosts of venereal-stricken men is not a fraction less; it is probably more expensive."

We are by no means certain that this is best or that it is not best. The more profoundly and conscientiously one studies the problem, not only as to India, but as to every country and city, the more one is in distressing doubt as to what to advise. The purely sentimental view—that of women and of the Women's Christian Temperance Union—will certainly and more quickly lead to wretched depths of suffering and disaster than the license system, but ——.

The Infectious Nature of Acute Articular Rheumatism.—Analogy and the conceptions of modern pathology have long suggested an infectious origin for acute articular rheumatism, but the demonstration of such an etiology is yet wanting. An important contribution to this subject has just been made by SAHLI (*Archiv für klin. Medicin*, Band li, Hefte 4 und 5, p. 451), of Berne, who, in a fatal case of acute articular rheumatism complicated by endocarditis, pericarditis, pleurisy, and pneumonia, succeeded in isolating from the affected joint, from the endocarditic vegetations, from the pericarditic and pleuritic deposits, from the enlarged bronchial glands, and from the blood, a microörganism corresponding in its morphologic characters with the staphylococcus pyogenes citreus, but not causing suppuration. Accepting the etiologic part played by this organism in the given case Sahli, raises the interesting question as to whether it is really a modified staphylococcus citreus or a distinct organism, himself leaning to the first view. The interesting proposition is also made that rheumatism may be caused by one of a number of organisms. In the case reported the evidence indicates that the endocardial, pericardial, and pleural inflammations were not true complications, but co-manifestations, with the joint-affection, of the localization of the causative agency of the primary disease.

The St. John Ambulance.—The Columbian Exposition, which is such an educator in many directions, is now able to exhibit a most admirable and complete ambulance service. The ambulance, which has just been secured through the energy of the head of the department, is a model for this country. It is the pattern well known in England as that of the St. John Ambulance Association. The strong, still-running wheels are surrounded by heavy rubber tires. The rear of the box opens by two doors, and a step comes down. A snap loosens a stretcher, which is drawn out on rollers; a second stretcher may be removed in the same manner.

When both stretchers are full, the first one is slid in on rollers and quickly raised on levers two and a half feet. The second stretcher is then run under it. Four injured men and two doctors can sit in the other half of the ambulance at the same time. The sides of the ambulance have each two large glass windows and curtains, with large manageable ventilators above the windows. The interior is lighted by electricity. This ambulance will easily and comfortably carry at one time the driver, two attendants, five injured persons sitting and two lying on stretchers. With this new ambulance the medical service at the Fair is complete.

A Scientific Investigation of the Poison of Rhus Toxicodendron Desirable.—THE NEWS of October 24, 1891, p. 484, and November 7, 1891, pp. 555, 556, contained a number of interesting communications concerning the toxic action of *rhus toxicodendron*, illustrating the remarkable property of this poison of transmission from person to person. Facts have lately come to our notice showing beyond question that the poison is often air-borne. There is a chance here for an interesting and valuable investigation to be made by some ambitious laboratory student or physician who has no personal idiosyncrasy as regards affection by the agent. The essential toxic principle should be isolated, its action on the human skin studied, and some therapeutic measure learned for the benefit of those poisoned. For certain persons the plant is harmless; to others it is a violent and persistent vesicant, the repetition and continuance of auto-infection by the affected serum being frequent, long, and violent. It is not impossible that the essential toxin might, under certain modifications, be proved to possess peculiar therapeutic power, and be a valuable addition to our materia medica.

Dying Declarations.—Physicians are frequently charged with dying declarations. The law governing their admissibility in evidence is well settled, says the Supreme Court of Alabama, in the case of Blackburn *v.* State, just reported (13 Southern Reporter, 274). Such declarations are not admissible unless they appear to have been made under a sense of certain and impending death. It is not what the court which passes upon their admissibility may believe the condition of the deceased was, for, although it may appear to the court, or to anyone capable of thinking rationally, that there was no possible hope of recovery, yet the question aside from that is, What was the state of the declarant's mind when the declarations were made? Did he appreciate the fatal character of his injury, and were his declarations uttered under the sense and solemnities of impending dissolution? If so, then, "when the death of the deceased is the subject of the charge, and the circumstances the subject of the dying declarations," they may be admitted in evidence; otherwise not.

Insanity from Jealousy or Revenge.—The heat of passion, and feeling produced by motives of anger, hatred, or revenge, is not insanity. The law holds the doer of the act, under such conditions, responsible for the crime, because a large share of homicides committed are occasioned by just such motives as these. If, however, there is any such thing as insanity produced by jealousy or revenge or wrath—genuine insanity, not mere turbulence of passion produced by desire for revenge; but if there is any genuine insanity, produced by any cause—then, says the Court of Appeals of New York, in the case of People *v.* Foy (34 Northeastern Reporter, 396), so far as affecting the prisoner, it is the same as any other kind of insanity.

REVIEWS.

DIE SYMPHYSEOTOMIE. Von PROF. DR. PAUL ZWEIFEL, Director der Universitäts-Frauenklinik in Leipzig. Nach einem in der medicinischen Gesellschaft zu Leipzig gehaltenen Vortrage. Leipzig, 1893.

SYMPHYSIOTOMY. By PROF. PAUL ZWEIFEL, M.D., Director of the University Obstetric Clinic, of Leipzig. A Report presented before the Medical Society of Leipzig, 1893. Small 8vo, pp. 79.

AFTER having had a remarkable success in the operation of Cesarean section, in which he has had as many as thirteen cases in order, with the loss of one child, but of no mother, Prof. Zweifel on September 27, 1892, took up that of symphysiotomy, since which date, up to April 27, 1893, a period of seven months, he had twelve operations without a death, and all of the children as far as reported were delivered alive. The first child died in two days; but nothing is said of a subsequent death in any of the other eleven. Prof. Zweifel, with his assistant, Dr. Döderlein, had eight Cesarean operations without a death last year; showing that he has made the pubic division a more frequent substitute for craniotomy. Of the twelve women, only one had the minimum *conjugata vera* of 2¾ inches, and the others varied from 3 1/16 to 3¼ inches. The children were in general of large size—from 19¼ inches to 21¾ inches long, and from 3200 to 3700 grams in weight; the bi-parietal diameters were from 3½ to 4 inches; the duration of labor was from seven to forty-eight hours, but only three extended beyond twenty-four hours. One woman had previously been subjected to the Cesarean section.

Case XII deserves special notice, as the woman, twenty-nine years old, had a double uterus and vagina, with the fetus developed in the right half of the organ. She had been eighteen hours in labor. The fetus was a male of medium size, born asphyxiated, but revived. The woman was 4 feet, 7⅝ inches high, and had a generally contracted symmetric pelvis, with a conjugata diagonalis of 10.5 c.m.

Ten of the women were delivered by the forceps; the instruments of Tarnier and Naegeli being used; five by the high application, and four in the pelvic cavity, Prof. Zweifel having been very successful with symphysiotomy, as we have shown, is quite in favor of this method of delivery, which is now enduring the most severe trial that it has ever had to bear. It will require a test of several years before its true value can be established, as men are now divided in opinion, according to their measure of success, and this depends very much upon the care and patience exercised in drawing the fetus through the pelvis and soft parts. The chief danger is from sepsis, and this may come from the symphysis; or from lacerations made in delivery. There have now been thirty cases on this side of the Atlantic, with

four deaths: three operations in Canada, two in Brazil, and twenty-five in the United States.

MEDICAL POCKET ATLASES. OBSTETRICS. PART I, LABOR, DELINEATED IN NINETY-EIGHT PLATES. By O. SCHAEFFER, M.D., Assistant at the University Frauenklinik in Munich. Translated and published under the supervision of J. CLIFTON EDGAR, M.D., Adjunct Professor of Obstetrics in the University of the City of New York, etc. New York: L. Hydel, 1893.

IN this small production the author attempts to depict in a series of ninety-eight colored plates the various fetal positions, normal and abnormal, together with the obstetric operations devised to correct the latter. As far as he goes he has been fairly successful in his aim, and most of the plates illustrate what they were intended to show. There are some grave defects, however, that cannot be overlooked. In the first place, the series of plates is by no means complete, and it cannot be claimed that "labor" has been fully delineated. The valuable dilating function of the bag of waters has been largely slurred; the *successive* stages of the various positions are not presented; the posterior brow-position is entirely omitted; the Schatz method of external version in face-presentation is but poorly depicted; the high position of the contraction-ring, the most serious complication in impacted shoulder-presentation, is not shown at all; and while the methods of version and the application of the forceps are presented, there are no illustrations of the several operations in embryotomy. Teaching by pictures is a valuable method of imparting knowledge, and the undoubted intrinsic value of this Atlas could be materially increased by an observance of the suggestions offered.

SULLA ORIGINES DEI CORPUSCOLI DEL SANGUE. RICERCHES DEL DOTT. VINCENZIO ALLARA. Milano: C. Chiesa e F. Guindani, 1893.

THIS new contribution to a study already rendered famous by Bizzozero, displays great boldness and originality of reasoning, with much interesting, though vague, research—vague, we mean, as regards the details, but explicit enough in other ways. The author proceeds critically rather than experimentally.

On the subject of the origin of the blood-corpuscles, his views may be summarized as follows: The white corpuscles arise from what he terms "mucous cells," or "cellule mucori." The "cellule mucori" are produced in the deep layer of the epithelium of the digestive canal, where they are held during their incubation (incubazione). The digestive canal (tubo digesente) preserves this function throughout embryonic and adult life.

Again, in the embryo tiny vesicles in the ciliated meshes that surround the vesicle of the allantois, which "now acquire a new significance, physiologically speaking, which is that from the epithelium therein arise the 'mucous cells' (or cellule mucore), and from these the large variety of the leukocytes of the blood and lymph. The origin of the white corpuscles of the blood and lymphatics is, therefore, not in the mesoderm, but, in truth, in the internal fold of the blastoderm.

We cordially recommend this book, which, in spite of some very obvious confusion, in spite of some lack of method, is a truly ingenious and original effort.

THE RECRUDESCENCE OF LEPROSY AND ITS CAUSATION. A Popular Treatise. By WILLIAM TEBB. 8vo, pp. 412. London: Sloan, Sonnenschein & Co., 1893.

THE author, who has both travelled much in countries where leprosy is found and has read extensively the literature of the subject, calls attention in this volume to the danger of inoculation of this disease through vaccination. He is a strong opponent to vaccination, stating in the preface that "for nearly a century Jenner's prescription has been tried and found wanting." With this as the key-note to the book, the medical man knows what to expect in the succeeding pages. At the same time the subject is treated from a practical standpoint, the statements being supported by references from high authorities in this disease from all countries. Numerous cases and much evidence in favor of the author's theory, as well as on other points, are brought forward, with the conclusion that the disease is not contagious in the ordinary sense of this word; that it is inoculable; that the most frequent opportunities of inoculating the disease are found in vaccination, and that this is a true cause of the spread of the disease; that the increase of leprosy in the Sandwich Islands and elsewhere has followed *pari passu* with the introduction and extension of vaccination, and that there is great danger of extending the disease by arm-to-arm vaccination.

ELECTRO-THERAPEUTICS OF NEURASTHENIA. By W. F. ROBINSON, M.D. (Physician's Leisure Library.) Detroit: George S. Davis, 1893.

THE author, following Dana, adopts a clinical classification, making such divisions as neurasthenia of adolescence, climacteric neurasthenia, that following acute disease, nervous shock, etc. A decided preference is shown for the static current; twenty-two pages are devoted to it, sixteen to galvanism, and six to faradism. The author advocates large contact-electrodes for galvanism, moistened in a solution of sodium bicarbonate and for the abdomen a spongio-piline electrode, eight inches in diameter, instead of the small instruments so much in vogue.

In using faradism the author advises that the current be passed to the patient through the nurse's hand after a thorough soaking in warm water, with an attempt to get a massage effect in addition; but no directions are given for the use of a slowly interrupted faradic current for individual muscular contraction and exercise, one of the main-stays in the treatment of severe cases of neurasthenia. Dr. Robinson evidently studies and treats the patient as well as his disease.

HYPNOTISM, MESMERISM, AND THE NEW WITCHCRAFT. By ERNEST HART. With twenty illustrations. New York: D. Appleton & Co., 1893.

FAMILIARITY with the literature of the delusion variously known as hypnotism, mesmerism, witchcraft, etc. with thirty years' personal study of its phenomena, eminently fitted Mr. Hart for the investigation he undertook of the performances of Dr. Luys and Count Rochas. If

anything was needed to show how debasing all such experiments are, and to what extremes of imposture and immorality they may lead, these fearless papers have left that need no longer existant.

Mr. Hart shows clearly that the hypnotic state is an endowment of the subject, independently of the operator. But he shows, too, how the unfortunate subjects may become degraded into machines devoid of will, and what power the unscrupulous may gain over them. He has done a service not only to medicine but to sociology, to morality, and honesty.

We are glad that his papers have been gathered into book-form for permanent reference.

A CHAPTER ON CHOLERA FOR LAY READERS: History, Symptoms, Prevention, and Treatment of the Disease. By WALTER VOUGHT, Ph.B., M.D. Illustrated. 12mo, pp. 110. Philadelphia: The F. A. Davis Co., 1893.

THE lapse of time has fortunately almost dissipated the prognostication that "there is every reason to believe that cholera will appear this summer in our own country." Though a few cases have been brought to our doors, there is every reason to believe that our quarantine-measures will prevent the entrance of the disease. Dr. Vought has nevertheless succeeded in preparing a most interesting account of what there is worth knowing upon the subject. In successive sections he deals in a perspicuous manner with the history, the etiology, the epidemiology, the semeiology, the diagnosis, the prognosis, the treatment, and the prevention of cholera. While the work is dedicated to "lay readers," it will also prove valuable to medical men. It is thus deserving of a wide circulation.

REPORT OF THE COMMISSIONER OF EDUCATION FOR THE YEAR 1889–90. In two volumes. Washington, D. C.: Government Printing Office, 1893.

THE good results of such a work as this report can hardly be exaggerated. It is a mine of most valuable information to anyone interested in the subject of education of whatever kind and in all civilized countries. As regards medical education, the results of the report have already been epitomized by Dr. Bayard Holmes, of Chicago, in the *Journal of the American Medical Association*, January 14, 1893, a selection from which appeared in THE NEWS of February 18, 1893.

CORRESPONDENCE.

A LETTER FROM PROFESSOR CZERNY, OF HEIDELBERG.[1]

MY DEAR DR. C. H. MASTIN, Mobile, Alabama, U. S. A.:

I am truly ashamed that I gave you so much trouble, and that now the health of my wife and some unexpected troubles in the administration and arrangement of my clinic will interfere with my intention to visit the Congress at Washington, and to thank you personally for all your kindness, which you so richly bestowed to me during this year.

I must go with my wife to Kissengen, and I hope that she will be so much better that I can visit at the end of September the Congress at Rome.

You have been so kind to announce my arrival to many of the most prominent men in our science, and I must regret very much that it is impossible for me to use this opportunity to make the acquaintance of your great and interesting country, and the eminent members of the medical profession in America.

I hope that it will be possible for me to meet you in some more quiet year than this of the World's Fair, and that your kindness will pardon the troubles which I gave you by reason of the Pan-American Congress.

Some days ago I received the *Transactions and Minutes of the American Surgical Association*, and see that you are the Secretary of the Gross Monument Committee. Please let me enclose the little sum of $20 as a contribution to the monument, and express my admiration of the founder of the American Surgical Association and of the surgical work which he has done in your great country.

Believe me, dear colleague, the expression of the highest esteem of

Yours, very truly,

VINCENZ CZERNY.

HEIDELBERG, Aug. 1, 1893.

[1] [Through the courtesy of Dr. C. H. Mastin, of Mobile, we are permitted to publish this interesting personal letter.—ED. NEWS.]

FOREIGN BODY IN THE EAR FOR THIRTY-NINE YEARS.

To the Editor of THE MEDICAL NEWS,

SIR: In THE NEWS of August 5th, page 158, I noticed an account of a foreign body having been in the ear for twenty-one years.

On the 2d of April, Mrs. M., forty-four years old, came into my office complaining of a pain in the left ear, which, she said, had ached at times since she was a child. On examination I found that hearing was almost entirely lost in this ear and that the canal was filled with a hard substance. After considerable difficulty I dislodged a mass as large as an ordinary white bean, which in reality it proved to be, and which the woman recollected to have gotten in the ear when she was about five years of age, and which had thus remained there for thirty-nine years. Immediately after its removal she could hear the watch-tick at a distance of twenty inches from the ear, and since then she has had no trouble of any kind with the ear.

Respectfully,

W. F. CONNERS.

OIL CITY, PA.

NEWS ITEMS.

Pan-American Medical Congress.—Program of the Section on General Medicine: "The Principles of Immunity and Cure in the Infectious Diseases," by Victor C. Vaughan, of Ann Arbor; "Formas del Impaludismo," by Francisco A. Risquez, of Venezuela; "A Contribution to the Study of Prolonged Intermittent Fever," by David Lobo, of Venezuela; "A Study of Some Cases of Chronic Diabetes," by N. S. Davis, Jr., of Illinois; "Facts in Stethoscopic Percussion," by Henry Sewall, of Colorado;

"Typhoid," by W. C. Dabney, of Virginia; "The Importance of Eliminating Pelvic Diseases in General Diagnosis," by Mary H. McLean, of Missouri; "Colera Morbo Asiatico," by Santiago Hernandez, of Cuba; "Cholera: its Diagnosis, Prognosis, and Treatment," by J. M. Hurley, of California; "Cholera Asiatica," by J. D. Burch, of Texas; "A Case of Akromegalia in a Giantess," by Woods Hutchinson, of Iowa; "Cold Steel as an Anti-rheumatic," by W. K. Vance, of Tennessee; "Nutrition *vs.* Stimulation in the Treatment of Chronic Diseases," by W. H. Maxson, of California; "De la Buba," by Luis Razetti and N. Guardia, of Venezuela; "A New Disease of the West Indies," by Cuthbert Bowen, of Barbadoes; "La Cause de la Fièvre Jaune," by J. B. Lacerda, of Brazil; "The Bacteriology of Dengue Fever," by J. W. McLaughlin, of Texas; "Culture of Anaërobic Bacteria," by F. G. Novy, of Michigan; "A New Anaërobic Bacillus of Malignant Edema," by F. G. Novy, of Michigan; "Clinical Notes on Amebic Dysentery," by H. A. West, of Texas; "Some American Ideas about Chronic Diarrhea," by Ephraim Cutter, of New York; "Tratamiento Medico del Vomito Negro," by S. B. Mateo, of Cuba; "La Folie cher le Negre," by J. B. Lacerda, of Brazil; "Progressive Pernicious Anemia," by Judson Daland, of Pennsylvania; "Vasomotor Ataxia," by S. Solis-Cohen, of Pennsylvania; "The Value of Rest as a Therapeutic Agent in Chronic Pulmonary Tuberculosis," by Karl Von Ruck, of North Carolina; "Consideraciones Sobre dos Casos de Anemia por Ankylostoma Duodenale Observados en el Hospital del Victor Manuel de Lima," by J. B. Agnoli, of Peru; "Recent Experiences in Croupous Pneumonia, with Observations on Treatment by Subcutaneous Injections of Saline Solutions," by R. L. Cunningham, of Alabama; "On the Occurrence of a Form of Chronic Bright's Disease other than the Typical Fibroid Kidney, without Albuminuria," by D. D. Stewart, of Pennsylvania; "The Complicating Conditions, Associated Diseases, and Mortality Rate in Erysipelas," by James M. Anders, of Pennsylvania; "Carcinoma of the Bones, with Multiple Fracture; Ulcer of the Duodenum, with Death from Hemorrhage," by John H. Musser, of Pennsylvania; "The Anatomic Relations of the Plasmodium Malariæ in Pernicious Fever," by George Dock, of Michigan; "Filaria," by G. DeSaussure, of South Carolina; "The Nature of the Germicidal Constituent of Blood-serum," by Victor C. Vaughan, of Michigan; "Forced Respiration," by George F. Fell, of New York.

Papers have also been promised by Manuel Carmona, of Mexico; J. E. Graham, of Ontario; Dr. Guzman, of Nicaragua; Charles G. Stockton, of New York; F. Peyre Porcher, of South Carolina; C. S. Bond, of Indiana; I. N. Danforth, of Illinois; H. C. B. Alexander, of Illinois; E. L. Shurly, of Michigan; and W. S. Christopher, of Illinois.

The William F. Jenks Memorial Prize.—The third triennial prize, of five hundred dollars, under the deed of trust of Mrs. William F. Jenks, will be awarded to the author of the best essay on "Infant Mortality during Labor, and its Prevention."

The conditions annexed by the founder of this prize are, that the "prize or award must always be for some subject connected with obstetrics, or the diseases of women, or the diseases of children;" and that "the trustees, under this deed for the time being, can, in their discretion, publish the successful essay, or any paper written upon any subject for which they may offer a reward, provided the income in their hands may, in their judgment, be sufficient for that purpose, and the essay or paper be considered by them worthy of publication. If published, the distribution of said essay shall be entirely under the control of said trustees. In case they do not publish the said essay or paper, it shall be the property of the College of Physicians of Philadelphia."

The prize is open for competition to the whole world, but the essay must be the production of a single person.

The essay, which must be written in the English language, or if in a foreign language, accompanied by an English translation, should be sent to the College of Physicians of Philadelphia, Pennsylvania, U. S. A., before January 1, 1895, addressed to Horace Y. Evans, M.D., Chairman of the William F. Jenks Prize Committee.

Each essay must be typewritten, distinguished by a motto, and accompanied by a sealed envelop bearing the same motto and containing the name and address of the writer. No envelop will be opened except that which accompanies the successful essay.

The committee will return the unsuccessful essays if reclaimed by their respective writers, or their agents, within one year.

The committee reserves the right not to make an award if no essay submitted is considered worthy of the prize.

The Cholera.—The Imperial Board of Health of Berlin announces that there have been thus far this Summer only four cases of cholera in Germany. Three of the persons attacked died.

The official cholera report from the affected Russian governments for the week ending August 21 is as follows:

In Kiev there were 529 new cases and 184 deaths; in Nijni Novgorod, 468 new cases and 191 deaths; in the Don province, 245 new cases and 109 deaths; in Samara, 198 new cases and 75 deaths; in Kazan, 75 new cases and 28 deaths; in Kalisco, 97 new cases and 33 deaths; in Minsk, 32 new cases and 15 deaths; in Simbirsk, 31 new cases and 11 deaths, and in Kherson, 54 new cases and 22 deaths.

In the City of Moscow the daily averages for the week were 99 new cases and 38 deaths.

There have been five cholera deaths at Helsingfors, the capital of Finland.

From Bucharest it is stated that no cholera exists in that city. At Soolina the epidemic spreads rapidly. The mortality is exceptionally large.

There were on August 21 nine fresh cases of cholera in Naples, and six deaths. Seven fresh cases and five deaths were reported on August 22.

Deaths from cholera are reported from Oviglio, Roocaverano and San Giuliano-Vecchio.

Transportation Rates to the Pan-American Medical Congress have been obtained over most of the railroad routes to Washington at one and one-third the usual rate for the round trip, on the certificate plan. The Chairman of

the Committee is Dr. H. L. E. Johnson, No. 1400 L Street, N. W., Washington, D. C. The certificate referred to must be secured at the time of the purchase of the ticket to Washington, on which, properly signed by Dr. Johnson, the reduced rate will be allowed returning. The full fare is to be paid on the going trip to Washington, and a two-thirds reduction is allowed when the ticket is purchased in Washington for the return trip. These certificates must be obtained at the ticket offices at the time the ticket is purchased. Be sure to state that you are a delegate and will be in attendance at the meeting.

National Conference of State Medical, Examining, and Licensing Boards.—At a recent meeting of the National Conference of State Medical, Examining, and Licensing Boards held at Milwaukee, it was the expressed desire of the members present that all State Boards should be enrolled as members of the Conference, in order that future meetings shall prove of more than ordinary interest and profit, to the end of elevating the standard of medical education. It is also desirable that there be established closer relations between the various Boards, so that there may be an interchange of ideas and an active coöperation in all that pertains to higher medical education. The first annual fee is $2. Dr. C. K. Cole, President of the Board of Medical Examiners of Montana (Helena), is the Secretary and Treasurer of the National Conference.

Charcot Dead.—A cablegram from Paris announces that Jean Martin Charcot, the distinguished French physician, died on August 15th at Morvan.

Charcot was born in Paris in 1825. In 1856 he was appointed Physician to the Central Bureau, and from that time devoted himself to the study of the nervous system. His writings have been quite voluminous. He was a member of the Institute of France, of the Royal Irish Academy, of the Royal Medical and Chirurgical Society of London, and of many other scientific societies in various countries.

Dominion Medical Monthly is the name of a new medical monthly emanating from Toronto, Canada. The first number bears the date of July and contains a report of the third case of symphysiotomy recorded in Canada, in addition to an article on appendicitis, reports of societies, and other miscellaneous matter. The journal promises to be one for and by the medical profession. We question the wisdom of presenting reading matter and advertisements on the same pages.

Dr. John Guitéras, formerly Passed Assistant Surgeon Marine-Hospital Service, now Professor of Pathology in the University of Pennsylvania, has been appointed a Sanitary Inspector in the Marine-Hospital Service, and has been ordered by Supervising Surgeon-General Wyman to Brunswick, Ga., to assist in all preventive measures employed there.

BOOKS AND PAMPHLETS RECEIVED.

Manual of Chemistry. By W. Simon, Ph.D., M.D. Fourth edition. Philadelphia: Lea Brothers & Co., 1893.

Two Lectures on the Conduct of the Medical Life. By S. Weir Mitchell, M.D., LL.D. Addressed to the Students of the University of Pennsylvania and the Jefferson Medical College. Philadelphia: University of Penna. Press, 1893.

A Year's Work in Minor Surgical Gynecology at the Kensington Hospital for Women. By Charles P. Noble, M.D. Reprinted from the Transactions of the Philadelphia County Medical Society, 1892.

Points in Office Practice in the Treatment of the Diseases of Women. By Charles P. Noble, M.D. Reprinted from the Transactions of the Philadelphia County Medical Society, 1892.

A Clinico-pathological Study of Injuries to the Head, with Special Reference to Lesions of the Brain-substance. By Charles Phelps, M.D. Reprinted from the New York Medical Journal, 1893.

Neuritis and Myelitis and the Forms of Paralysis and Pseudo-paralysis following Labor. By Charles K. Mills, M.D. Reprinted from the University Medical Magazine, 1893.

The Necessity for Early Recognition and Treatment of Suppurative Diseases of the Tympanum, and their Relation to Cerebral Complications. By S. MacCuen Smith, M.D. Reprinted from the Transactions of the Philadelphia County Medical Society, 1893.

The Present Status of Electrolysis in the Treatment of Urethral Strictures, with Statistics of One Hundred Cases. By Robert Newman, M.D. Reprinted from the Journal of the American Medical Association, 1893.

The Cure of Complete Prolapse of the Rectum by Posterior Proctectomy. By John B. Roberts, M.D. Reprinted from the American Journal of the Medical Sciences, 1893.

Higher Preliminary Medical Education. The Influence of the German Universities upon our Profession. By Henry E. Dwight, M.D. Pamphlet.

The Etiology, Distribution, and Prevention of Land and Ship Cholera. By George M. Kober, M.D. Reprinted from the Proceedings of the California Sanitary Convention, 1893.

Constipation, Especially in its Relations to the Diseases Peculiar to Women. By Andrew F. Currier, M.D. Reprinted from the New York Medical Journal, 1893.

Certain Forms of Septicémia Resulting from Abortion. By Andrew F. Currier, M.D. Reprinted from the Annals of Gynecology and Pediatry, 1893.

Shaking Palsy. By C. L. Dana, A.M., M.D. Reprinted from the New York Medical Journal, 1893.

A Manual of Diseases of the Ear. By Geo. P. Field, M.R.C.S. Fourth edition. Philadelphia: Lea Brothers & Co., 1893.

Proceedings of the State Sanitary Convention. Held under the auspices of the State Board of Health of California. Sacramento: H. S. Crocker & Co., 1893.

Lymphoid Growths in the Vault of the Pharynx. By Thomas H. French, M.D. Reprinted from the Brooklyn Medical Journal, 1893.

The Structures in the Mesosalpinx: Their Normal and Pathological Anatomy. By J. W. Ballantine, M.D., F.R.C.P. Edin., F.R.S. Edin., and J. D. Williams, M.D., B.Sc. Edinburgh: Oliver & Boyd, 1893.

Hemianopsia or Hemianopia. By William Oliver Moore, M.D. Reprinted from International Clinics. Vol. III, second series.

System of Diseases of the Ear, Nose, and Throat. Edited by Charles H. Burnett, A.M., M.D. Vol. I. Philadelphia: J. B. Lippincott Co., 1893.

Sulla Origine dei Corpuscole del Sangue. Ricerche del Dott. Vincenzo Allara. Milano: Presso La Libreria Editrice Galli di C. Chiesa E. F. Guindani, 1893.

University of Pennsylvania. Catalogue and Announcements, 1892–93. Philadelphia: Printed for the University, 1893.

Seventy-ninth Annual Report of the Trustees of the Massachusetts General Hospital and McLean Hospital, 1892. Boston: L. Barta & Co., Printers, 1893.

Surgical Therapy of Rectal Cancer. By Thomas H. Manley, M.D. Reprinted from Merck's Bulletin, 1893.

The Johns Hopkins Hospital Reports. III. Reports in Pathology. Baltimore: The Johns Hopkins Press, 1893.